Thornwood Furniture Manufacturing, Inc.
5125 E Madison
Permit Number V99-005
Including Significant Revision S04-011
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October 6, 2005

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In accordance with Maricopa County Air Pollution Control Rules and Regulations (Rules), Rule 210 § 302.2, all Conditions of this Permit are federally enforceable unless they are identified as being locally enforceable only. However, any Permit Condition identified as locally enforceable only will become federally enforceable if, during the term of this Permit, the underlying requirement becomes a requirement of the Clean Air Act (CAA) or any of the CAA's applicable requirements.

All federally enforceable terms and conditions of this Permit are enforceable by the Administrator of the United States Environmental Protection Agency (Administrator or Administrator of the USEPA hereafter) and citizens under Section 304 of the CAA.

Any cited regulatory paragraphs or section numbers refer to the version of the regulation that was in effect on the first date of public notice of the applicable Permit Condition unless specified otherwise.

GENERAL CONDITIONS:

1. AIR POLLUTION PROHIBITED: [County Rule 100 §301] [SIP Rule 3]

The Permittee shall not discharge from any source whatever into the atmosphere regulated air pollutants which exceed in quantity or concentration that specified and allowed in the County or State Implementation Plan (SIP) Rules, the Arizona Administrative Code (AAC) or the Arizona Revised Statutes (ARS), or which cause damage to property or unreasonably interfere with the comfortable enjoyment of life or property of a substantial part of a community, or obscure visibility, or which in any way degrade the quality of the ambient air below the standards established by the Maricopa County Board of Supervisors or the Director of the Arizona Department of Environmental Quality (ADEQ).

2. CIRCUMVENTION: [County Rule 100 §104] [40 CFR 60.12] [40 CFR 63.4(b)]

The Permittee shall not build, erect, install, or use any article, machine, equipment, condition, or any contrivance, the use of which, without resulting in a reduction in the total release of regulated air pollutants to the atmosphere, conceals or dilutes an emission which would otherwise constitute a violation of this Permit or any Rule or any emission limitation or standard. The Permittee shall not circumvent the requirements concerning dilution of regulated air pollutants by using more emission openings than is considered normal practice by the industry or activity in question.

3. CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETENESS:

[County Rule 100 §401] [County Rule 210 §§301.7, 302.1e(1), 305.1c(1) & 305.1e]

Any application form, report, or compliance certification submitted under the County Rules or these Permit Conditions shall contain certification by a responsible official of truth, accuracy, and completeness of the application form or report as of the time of submittal. This certification and any other certification required under the County Rules or these Permit Conditions shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

4. COMPLIANCE:

A. COMPLIANCE REQUIRED:

1) The Permittee must comply with all conditions of this permit and with all applicable requirements of Arizona air quality statutes and the air quality rules. Compliance with permit terms and conditions does not relieve, modify, or otherwise affect the Permittee's duty to comply with all applicable requirements of Arizona air quality statutes and the Maricopa County Air Pollution Control Regulations. Any permit non-compliance is grounds for enforcement action; for a permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application. Noncompliance with any federally enforceable requirement in this Permit constitutes a violation of the Act. [This Condition is federally enforceable if the condition or requirement itself is federally enforceable and only locally enforceable if the condition or requirement itself is locally enforceable only]

[County Rule 210 §§301.8b(4) & 302.1h(1)]

2) The Permittee shall halt or reduce the permitted activity in order to maintain compliance with applicable requirements of Federal laws, Arizona laws, the County Rules, or other conditions of this Permit.

[County Rule 210 §302.1h(2)]

3) For any major source operating in a nonattainment area for any pollutant(s) for which the source is classified as a major source, the source shall comply with reasonably available control technology (RACT) as defined in County Rule 100.

[County Rule 210 §302.1(h)(6)] [SIP Rule 220 §302.2]

4) For any major source operating in a nonattainment area designated as serious for PM_{10}, for which the source is classified as a major source for PM_{10}, the source shall comply with the best available control technology (BACT), as defined in County Rule 100.

[County Rule 210 §302.1(h)(7)]

B. COMPLIANCE CERTIFICATION REQUIREMENTS: [County Rule 210 §305.1d]

The Permittee shall file an annual compliance certification with the Control Officer and also with the Administrator of the USEPA. The report shall certify compliance with the terms and conditions contained in this Permit, including emission limitations, standards, or work practices. The certification shall be on a form supplied or approved by the Control Officer and shall include each of the following:

1) The identification of each term or condition of the permit that is the basis of the certification;
2) The compliance status;
3) Whether compliance was continuous or intermittent;
4) The method(s) used for determining the compliance status of the source, currently and over the reporting period; and
5) Other facts as the Control Officer may require to determine the compliance status of the source.

The annual certification shall be filed at the same time as the second semiannual monitoring report required by the Specific Condition section of these Permit Conditions and every 12 months thereafter.

C. COMPLIANCE PLAN: [County Rule 210 §305.1g]

Based on the certified information contained in the application for this Permit, the facility is in compliance with all applicable requirements in effect as of the first date of public notice of the proposed conditions for this Permit unless a compliance plan is included in the Specific Conditions section of this Permit. The Permittee shall continue to comply with all applicable requirements and shall meet any applicable requirements that may become effective during the

term of this permit on a timely basis. [This Condition is federally enforceable if the applicable requirement itself is federally enforceable and only locally enforceable if the applicable requirement itself is locally enforceable only]

5. CONFIDENTIALITY CLAIMS:

Any records, reports or information obtained from the Permittee under the County Rules or this Permit shall be available to the public, unless the Permittee files a claim of confidentiality in accordance with ARS §49-487(c) which:

A. precisely identifies the information in the permit(s), records, or reports which is considered confidential, and

B. provides sufficient supporting information to allow the Control Officer to evaluate whether such information satisfies the requirements related to trade secrets or, if applicable, how the information, if disclosed, could cause substantial harm to the person's competitive position.

The claim of confidentiality is subject to the determination by the Control Officer as to whether the claim satisfies the claim for trade secrets.

[County Rule 100 §402] [County Rule200 §411]

A claim of confidentiality shall not excuse the Permittee from providing any and all information required or requested by the Control Officer and shall not be a defense for failure to provide such information.

[County Rule 100 §402]

If the Permittee submits information with an application under a claim of confidentiality under ARS §49-487 and County Rule 200, the Permittee shall submit a copy of such information directly to the Administrator of the USEPA.

[County Rule 210 §301.5]

6. CONTINGENT REQUIREMENTS:

NOTE: This Permit Condition covers activities and processes addressed by the CAA which may or may not be present at the facility. This condition is intended to meet the requirements of both Section 504(a) of the 1990 Amendments to the CAA, which requires that Title V permits contain conditions necessary to assure compliance with applicable requirements of the Act as well as the Acid Rain provisions required to be in all Title V permits.

A. ACID RAIN: [County Rule 210 §§302.1b(2) & 302.1f] [County Rule 371 §301]

1). Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the CAA and incorporated under County Rule 371, both provisions shall be incorporated into this Permit and shall be enforceable by the Administrator.

2) The Permittee shall not allow emissions exceeding any allowances that the source lawfully holds under Title IV of the CAA or the regulations promulgated thereunder and incorporated under County Rule 371.

a) No permit revision shall be required for increases in emissions that are authorized by allowances acquired under the acid rain program and incorporated under County Rule 371, provided that such increases do not require a permit revision under any other applicable requirement.

b) No limit is placed on the number of allowances held by the Permittee. The Permittee may not, however, use allowances as a defense to non-compliance with any other applicable requirement.

c) Any such allowance shall be accounted for according to the procedures established in regulations promulgated under Title IV of the CAA.

d) All of the following prohibitions apply to any unit subject to the provisions of Title IV of the CAA and incorporated into this Permit under County Rule 371:
   (1) Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide held by the owners or operators of the unit or the designated representative of the owners or operators.
   (2) Exceedances of applicable emission rates.
   (3) The use of any allowance prior to the year for which it was allocated.
   (4) Violation of any other provision of the permit.

B. ASBESTOS: [40 CFR 61, Subpart M] [County Rule 370 §301.8 - locally enforceable only]
The Permittee shall comply with the applicable requirements of Sections 61.145 through 61.147 and 61.150 of the National Emission Standard for Asbestos and County Rule 370 for all demolition and renovation projects.

C. RISK MANAGEMENT PLAN (RMP): [40 CFR 68]
Should this stationary source, as defined in 40 CFR 68.3, be subject to the accidental release prevention regulations in 40 CFR Part 68, then the Permittee shall submit an RMP by the date specified in 40 CFR Section 68.10 and shall certify compliance with the requirements of 40 CFR Part 68 as part of the annual compliance certification as required by 40 CFR Part 70. However, neither the RMP nor modifications to the RMP shall be considered to be a part of this Permit.

D. STRATOSPHERIC OZONE PROTECTION: [40 CFR 82 Subparts E, F, and G]
If applicable, the Permittee shall follow the requirements of 40 CFR 82.106 through 82.124 with respect to the labeling of products using ozone depleting substances.

If applicable, the Permittee shall comply with all of the following requirements with respect to recycling and emissions reductions:
1) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices under 40 CFR 82.156.
2) Equipment used during maintenance, service, repair, or disposal of appliances must meet the standards for recycling and recovery equipment in accordance with 40 CFR 82.158.
3) Persons performing maintenance, service, repair, or disposal of appliances must be certified by a certified technician under 40 CFR 82.161.

If applicable, the Permittee shall follow the requirements of 40CFR 82 Subpart G, including all Appendices, with respect to the safe alternatives policy on the acceptability of substitutes for ozone-depleting compounds.

7. DUTY TO SUPPLEMENT OR CORRECT APPLICATION: [County Rule 210 §301.6]
If the Permittee fails to submit any relevant facts or has submitted incorrect information in a permit application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, the Permittee shall provide additional information as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to release of a proposed permit.

8. EMERGENCY EPISODES: [County Rule 600 §302] [SIP Rule 600 §302]
If an air pollution alert, warning, or emergency has been declared, the Permittee shall comply with any applicable requirements of County Rule 600 §302.

9. EMERGENCY PROVISIONS: [County Rule 130 §§201 & 402]

An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, that require immediate corrective action to restore normal operation, and that cause the source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

An emergency constitutes an affirmative defense to an action brought for noncompliance with the technology-based emission limitations if the requirements of this Permit Condition are met.

The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

A. An emergency occurred and that the Permittee can identify the cause or causes of the emergency;
B. At the time of the emergency, the permitted source was being properly operated;
C. During the period of the emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in this permit; and
D. The Permittee as soon as possible telephoned the Control Officer, giving notice of the emergency, and submitted notice of the emergency to the Control Officer by certified mail, facsimile, or hand delivery within 2 working days of the time when emission limitations were exceeded due to the emergency. This notice fulfills the requirement of County Rule 210 §302.1.e(2) with respect to deviation reporting. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.

In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

This provision is in addition to any emergency or upset provision contained in any applicable requirement.

10. EXCESS EMISSIONS: [County Rule 140 §§103, 401 & 402]

NOTE: There are reporting requirements associated with excess emissions. These requirements are contained in the Reporting section of the General Permit Conditions in a subparagraph called Excess Emissions. The definition of excess emissions can be found in County Rule 100 §200.

A. Exemptions: The excess emissions provisions of this Permit Condition do not apply to the following standards and limitations:

1) Promulgated pursuant to Section 111 (Standards Of Performance for New Stationary Sources) of the Clean Air Act (Act) or Section 112 (National Emission Standards For Hazardous Air Pollutants) of the Act;
2) Promulgated pursuant to Title IV (Acid Deposition Control) of the Act or the regulations promulgated thereunder and incorporated under Rule 371 (Acid Rain) of these rules or Title VI (Stratospheric Ozone Protection) of the Act;
3) Contained in any Prevention Of Significant Deterioration (PSD) or New Source Review (NSR) permit issued by the Environmental Protection Agency (EPA);
4) Included in a permit to meet the requirements of Rule 240 (Permit Requirements For New Major Sources And Major Modifications To Existing Major Sources), Subsection 308.1(e) (Permit Requirements For Sources Located In Attainment And Unclassified Areas) of these rules.

B. Affirmative Defense For Malfunctions: Emissions in excess of an applicable emission limitation due to malfunction shall constitute a violation. The owner and/or operator of a source

with emissions in excess of an applicable emission limitation due to malfunction has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the owner and/or operator of the source has complied with the excess emissions reporting requirements of these Permit Conditions and has demonstrated all of the following:

1) The excess emissions resulted from a sudden and unavoidable breakdown of the process equipment or the air pollution control equipment beyond the reasonable control of the operator;
2) The source's air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
3) If repairs were required, the repairs were made in an expeditious fashion when the applicable emission limitations were being exceeded. Off-shift labor and overtime were utilized where practicable to ensure that the repairs were made as expeditiously as possible. If off-shift labor and overtime were not utilized, then the owner and/or operator satisfactorily demonstrated that such measures were impractical;
4) The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;
5) All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
6) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;
7) During the period of excess emissions, there were no exceedances of the relevant ambient air quality standards established in County Rule 510 that could be attributed to the emitting source;
8) The excess emissions did not stem from any activity or event that could have been foreseen and avoided, or planned, and could not have been avoided by better operations and maintenance practices;
9) All emissions monitoring systems were kept in operation, if at all practicable; and
10) The owner's and/or operator's actions in response to the excess emissions were documented by contemporaneous records.

C. Affirmative Defense For Startup And Shutdown:

1) Except as provided in paragraph 2) below, and unless otherwise provided for in the applicable requirement, emissions in excess of an applicable emission limitation due to startup and shutdown shall constitute a violation. The owner and/or operator of a source with emissions in excess of an applicable emission limitation due to startup and shutdown has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the owner and/or operator of the source has complied with the excess emissions reporting requirements of these Permit Conditions and has demonstrated all of the following:
    a. The excess emissions could not have been prevented through careful and prudent planning and design;
    b. If the excess emissions were the result of a bypass of control equipment, the bypass was unavoidable to prevent loss of life, personal injury, or severe damage to air pollution control equipment, production equipment, or other property;
    c. The source's air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
    d. The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable, during periods of such emissions;

e. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
f. During the period of excess emissions, there were no exceedances of the relevant ambient air quality standards established in County Rule 510 (Air Quality Standards) that could be attributed to the emitting source;
g. All emissions monitoring systems were kept in operation, if at all practicable; and
h. The owner's and/or operator's actions in response to the excess emissions were documented by contemporaneous records.

2) If excess emissions occur due to a malfunction during routine startup and shutdown, then those instances shall be treated as other malfunctions subject to paragraph A. of this Permit Condition.

D. Affirmative Defense For Malfunctions During Scheduled Maintenance: If excess emissions occur due to malfunction during scheduled maintenance, then those instances will be treated as other malfunctions subject to paragraph B. of this Permit Condition.

E. Demonstration Of Reasonable And Practicable Measures: For an affirmative defense under paragraphs A and B of this Permit Condition, the owner and/or operator of the source shall demonstrate, through submission of the data and information required by this Permit Condition and the excess emissions reporting requirements of these Permit Conditions, that all reasonable and practicable measures within the owner's and/or operator's control were implemented to prevent the occurrence of the excess emissions.

11. FEES: [County Rule 200 §409] [County Rule 210 §§302.1i & 401]
The Permittee shall pay fees to the Control Officer under ARS 49-480(D) and County Rule 280.

12. MODELING: [County Rule 200 §407] [locally enforceable only]
Where the Control Officer requires the Permittee to perform air quality impact modeling, the Permittee shall perform the modeling in a manner consistent with the "Guideline on Air Quality Models (Revised)" (EPA-450/2-78-027R, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, N.C. 27711, July 1986) and "Supplement B to the Guideline on Air Quality Models" (U.S. Environmental Protection Agency, September 1990). Both documents shall be referred to hereinafter as "Guideline", and are adopted by reference. Where the person can demonstrate that an air quality impact model specified in the guideline is inappropriate, the model may be modified or another model substituted if found to be acceptable to the Control Officer.

13. MONITORING / TESTING:

A. The Permittee shall monitor, sample, or perform other studies to quantify emissions of regulated air pollutants or levels of air pollution that may reasonably be attributable to the facility if required to do so by the Control Officer, either by Permit or by order in accordance with County Rule 200 §309.

[County Rule 200 §309] [SIP Rule 41]

B. Except as otherwise specified in these Permit Conditions or by the Control Officer, the Permittee shall conduct required testing used to determine compliance with standards or permit conditions established under the County or SIP Rules or these Permit Conditions in accordance with County Rule 270 and the applicable testing procedures contained in the applicable Rule, the Arizona Testing Manual for Air Pollutant Emissions or other approved USEPA test methods.

[County Rule 200 §408] [County Rule 210 §302.1.c] [County Rule 270 §§300 & 400] [SIP Rule 27]

C. The owner or operator of a permitted source shall provide, or cause to be provided, performance testing facilities as follows:
   1) Sampling ports adequate for test methods applicable to such source.
   2) Safe sampling platform(s).
   3) Safe access to sampling platforms(s).
   4) Utilities for sampling and testing equipment.

[County Rule 270 §405] [SIP Rule 42]

14. PERMITS:

A. BASIC: [County Rule 210 §302.1h(3)]

This Permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any Permit Condition.

B. DUST CONTROL PLAN REQUIREMENTS:

(NOTE: If the Permittee engages in or allows any routine dust generating activities at the facility, the Permittee needs to have the routine dust generating activity covered as part of this Permit. Nonroutine activities, such as construction, require a separate Earthmoving Permit that must be obtained from the Control Officer before the activity may begin.)

1) The Permittee must first submit a Dust Control Plan and obtain the Control Officer's approval of the Dust Control Plan before commencing any routine dust generating operation.

[County Rule 310 §303.3] [SIP Rule 310 §303.3]

2) A Dust Control Plan shall not be required to play on a ball field and/or for landscape maintenance. For the purpose of this Permit Condition, landscape maintenance does not include grading, trenching, nor any other mechanized surface disturbing activities.

[County Rule 310 §303.4] [SIP Rule 310 §303.4]

3) Any Dust Control Plan shall, at a minimum, contain all the information described in Section 304 of Rule 310.

[County Rule 310 §§303.1 & 304] [SIP Rule 310 §§303.1 & 304]

4) Regardless of whether an approved Dust Control Plan is in place or not, the Permittee is still subject to all requirements of Rule 310 at all times.

[County Rule 310 §303] [SIP Rule 310 §303]

C. PERMITS AND PERMIT CHANGES, AMENDMENTS AND REVISIONS:

1) The Permittee shall comply with the Administrative Requirements of Section 400 of County Rule 210 for all changes, amendments and revisions at the facility for any source subject to regulation under County Rule 200, shall comply with all required time frames, and shall obtain any required preapproval from the Control Officer before making changes. All applications shall be filed in the manner and form prescribed by the Control Officer. The application shall contain all the information necessary to enable the Control Officer to make the determination to grant or to deny a permit or permit revision including information listed in County Rule 200 §308 and County Rule 210 §§301 & 302.3.

[County Rule 200 §§301 & 308] [County Rule 210 §§301.4a, b, c, & 400]

2) The Permittee shall supply a complete copy of each application for a permit, a minor permit revision, or a significant permit revision directly to the Administrator of the USEPA. The Control Officer may require the application information to be submitted in a computer-readable format compatible with the Administrator's national database management system.

[County Rule 210 §§303.1a, 303.2, 405.4, & 406.4]

3) While processing an application, the Control Officer may require the applicant to provide additional information and may set a reasonable deadline for a response.

[County Rule 210 §301.4f]

4) No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.

[County Rule 210 §302.1j]

D. POSTING:

1) The Permittee shall keep a complete permit clearly visible and accessible on the site where the equipment is installed.

[County Rule 200 §311]

2) If a Dust Control Plan, as required by Rule 310, has been approved by the Control Officer, the Permittee shall post a copy of the approved Dust Control Plan in a conspicuous location at the work site, within on-site equipment, or in an on-site vehicle, or shall otherwise keep a copy of the Dust Control Plan available on site at all times.

[County Rule 310 §401] [SIP Rule 310 §401]

E. PROHIBITION ON PERMIT MODIFICATION: [County Rule 200 §310]

The Permittee shall not willfully deface, alter, forge, counterfeit, or falsify this permit.

F. RENEWAL:

1) The Permittee shall submit an application for the renewal of this Permit in a timely and complete manner. For purposes of permit renewal, a timely application is one that is submitted at least six months, but not more than 18 months, prior to the date of permit expiration. A complete application shall contain all of the information required by the County Rules including Rule 200 §308 and Rule 210 §§301 & 302.3.

[County Rule 210 §§301.2a, 301.4a, b, c, d, h & 302.3]

2) The Permittee shall file all permit applications in the manner and form prescribed by the Control Officer. To apply for a permit renewal, the Permittee shall complete the "Standard Permit Application Form" and shall supply all information, including the information required by the "Filing Instructions" as shown in Appendix B of the County Rules, which is necessary to enable the Control Officer to make the determination to grant or to deny a permit which shall contain such terms and conditions as the Control Officer deems necessary to assure a source's compliance with the requirements of the CAA, ARS and County Rules.

[County Rule 200 §§308 & 309] [County Rule 210 §301.1]

3) The Control Officer may require the Permittee to provide additional information and may set a reasonable deadline for a response.

[County Rule 210 §301.4f]

4) If the Permittee submits a timely and complete application for a permit renewal, but the Control Officer has failed to issue or deny the renewal permit before the end of the term

of the previous permit, then the permit shall not expire until the renewal permit has been issued or denied. This protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit, by the deadline specified by the Control Officer, any additional information identified as being needed to process the application.

[County Rule 200 §403.2] [County Rule 210 §§301.4f & 301.9]

G. REVISION / REOPENING / REVOCATION:

1) This permit shall be reopened and revised to incorporate additional applicable requirements adopted by the Administrator pursuant to the CAA that become applicable to the facility if this permit has a remaining permit term of three or more years. No such reopening is required if the effective date of the requirement is later than the date on which this Permit is due to expire unless the original permit or any of its terms have been extended pursuant to Rule 200 §403.2.

[County Rules 200 §402.1]

Any permit revision required under this Permit Condition, 14.G.1, shall reopen the entire permit and shall comply with provisions in County Rule 200 for permit renewal *(Note: this includes a facility wide application and public comment on the entire permit)* and shall reset the five year permit term.

[County Rules 200 §402.1a(1) & 210 §302.5]

2) This permit shall be reopened and revised under any of the following circumstances:
   a) Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the Title V permit.
   b) The Control Officer or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
   c) The Control Officer or the Administrator determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

Proceedings to reopen and issue a permit under this Permit Condition, 14.G.2, shall follow the same procedures as apply to initial permit issuance and shall effect only those parts of the Permit for which cause to reopen exists.

[County Rule 200 §402.1]

3) This permit shall be reopened by the Control Officer and any permit shield revised, when it is determined that standards or conditions in the permit are based on incorrect information provided by the applicant.

[County Rule 210 §407.3]

4) This Permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Permit revision, revocation and reissuance, or termination or of a notification of planned changes or anticipated noncompliance does not stay any Permit Condition.

[County Rule 210 §302.1h(3)]

H. REVISION UNDER A FEDERAL HAZARDOUS AIR POLLUTANT STANDARD:

[County Rule 210 §301.2c] [locally enforceable only]

If the Permittee becomes subject to a standard promulgated by the Administrator under Section 112(d) of the CAA, the Permittee shall, within 12 months of the date on which the standard is promulgated, submit an application for a permit revision demonstrating how the source will comply with the standard.

I. REQUIREMENTS FOR A PERMIT:

1) Air Quality Permit: Except as noted under the provisions in Sections 403 and 405 of County Rule 210, no source may operate after the time that it is required to submit a timely and complete application, except in compliance with a permit issued under County Rule 210. Permit expiration terminates the Permittee's right to operate. However, if a source submits a timely and complete application, as defined in County Rule 210 §301, for permit issuance, revision, or renewal, the source's failure to have a permit is not a violation of the County Rules until the Control Officer takes final action on the application. The Source's ability to operate without a permit as set forth in this paragraph shall be in effect from the date the application is determined to be complete until the final permit is issued. This protection shall cease to apply if, subsequent to the completeness determination, the applicant fails to submit, by the deadline specified in writing by the Control Officer, any additional information identified as being needed to process the application. If a source submits a timely and complete application for a permit renewal, but the Control Officer has failed to issue or deny the renewal permit before the end of the term of the previous permit, then the permit shall not expire until the permit renewal has been issued or denied.

[County Rule 210 §301.9]

2) Earthmoving Permit:

(NOTE: If the Permittee engages in or allows any routine dust generating activities at the facility, the Permittee needs to have the routine dust generating activity covered as part of this Permit. Non-routine activities, such as construction, require a separate Earthmoving Permit that must be obtained from the Control Officer before the activity may begin.)

The Permittee shall not cause, commence, suffer, allow, or engage in any earthmoving operation that disturbs a total surface area of 0.10 acre or more without first obtaining a permit from the Control Officer. Permits shall not be required for earthmoving operations for emergency repair of utilities, paved roads, unpaved roads, shoulders, and/or alleys.

[County Rule 200 §305]

3) Burn Permit: The Permittee shall obtain a Permit To Burn from the Control Officer before conducting any open outdoor fire except for the activities listed in County Rule 314 §§302.1 and 302.2.

[County Rule 314] [County Rule 200 §306] [SIP Rule 314]

J. RIGHTS AND PRIVILEGES: [County Rule 210 §302.1h (4)]

This Permit does not convey any property rights nor exclusive privilege of any sort.

K. SEVERABILITY: [County Rule 210 §302.1g]

The provisions of this Permit are severable, and, if any provision of this Permit is held invalid, the remainder of this Permit shall not be affected thereby.

L. SCOPE:

The issuance of any permit or permit revision shall not relieve the Permittee from compliance with any Federal laws, Arizona laws, or the County or SIP Rules, nor does any other law,

regulation or permit relieve the Permittee from obtaining a permit or permit revision required under the County Rules.

[County Rule 200 §308]

Nothing in this permit shall alter or affect the following:

1) The provisions of Section 303 of the Act (Emergency Orders), including the authority of the Administrator of the USEPA under that section.
2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of permit issuance.
3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Act.
4) The ability of the Administrator of the USEPA or of the Control Officer to obtain information from the Permittee under Section 114 of the Act, or any provision of State law.
5) The authority of the Control Officer to require compliance with new applicable requirements adopted after the permit is issued. [locally enforceable only]

[County Rule 210 §407.2]

M. TERM OF PERMIT: [County Rule 210 §§302.1a & 402]

This Permit shall remain in effect for no more than 5 years from the date of issuance.

N. TRANSFER: [County Rule 200 §404]

Except as provided in ARS §49-429 and County Rule 200, this permit may be transferred to another person if the Permittee gives notice to the Control Officer in writing at least 30 days before the proposed transfer and complies with the permit transfer requirements of County Rule 200 and the administrative permit amendment procedures under County Rule 210.

15. RECORDKEEPING:

A. RECORDS REQUIRED: [County Rule 100 §501] [County Rule 310 §502] [SIP Rule 40 A]

The Permittee shall maintain records of all emissions testing and monitoring, records detailing all malfunctions which may cause any applicable emission limitation to be exceeded, records detailing the implementation of approved control plans and compliance schedules, records required as a condition of any permit, records of materials used or produced, and any other records relating to the emission of air contaminants which may be requested by the Control Officer.

B. RETENTION OF RECORDS:

Unless a longer time frame is specified by these Permit Conditions, information and records required by applicable requirements and copies of summarizing reports recorded by the Permittee and submitted to the Control Officer shall be retained by the Permittee for 5 years after the date on which the information is recorded or the report is submitted

[County Rule 100 §504] [SIP Rule 40 C]

The Permittee shall retain records of all required monitoring data and support information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

[County Rule 210 §§302.1d(2)]

C. MONITORING RECORDS: [County Rule 210 §§302.1d(1) & 305.1b]

Records of any monitoring required by this Permit shall include the following:

1) The date, place as defined in the permit, and time of sampling or measurements;
2) The date(s) analyses were performed;
3) The name of the company or entity that performed the analysis;
4) The analytical techniques or methods used;
5) The results of such analysis; and
6) The operating conditions as existing at the time of sampling or measurement.

D. RIGHT OF INSPECTION OF RECORDS: [County Rule 100 §106] [SIP Rule 40 D]

When the Control Officer has reasonable cause to believe that the Permittee has violated or is in violation of any provision of County Rule 100 or any County Rule adopted under County Rule 100, or any requirement of this permit, the Control Officer may request, in writing, that the Permittee produce all existing books, records, and other documents evidencing tests, inspections, or studies which may reasonably relate to compliance or noncompliance with County Rules adopted under County Rule 100. No person shall fail nor refuse to produce all existing documents required in such written request by the Control Officer.

16. REPORTING:

NOTE: See the Permit Condition titled Certification Of Truth, Accuracy and Completeness in conjunction with reporting requirements.

A. ANNUAL EMISSION INVENTORY REPORT: [County Rule 100 §505] [SIP Rule 40 B]

Upon request of the Control Officer and as directed by the Control Officer, the Permittee shall complete and shall submit to the Control Officer an annual emissions inventory report. The report is due by April 30, or 90 days after the Control Officer makes the inventory form(s) available, whichever occurs later.

The annual emissions inventory report shall be in the format provided by the Control Officer.

The Control Officer may require submittal of supplemental emissions inventory information forms for air contaminants under ARS §49-476.01, ARS §49-480.03 and ARS §49-480.04.

B. DATA REPORTING: [County Rule 100 §502]

When requested by the Control Officer, the Permittee shall furnish to the Maricopa County Air Quality Division (Division hereafter) information to locate and classify air contaminant sources according to type, level, duration, frequency, and other characteristics of emissions and such other information as may be necessary. This information shall be sufficient to evaluate the effect on air quality and compliance with the County or SIP Rules. The Permittee may subsequently be required to submit annually, or at such intervals specified by the Control Officer, reports detailing any changes in the nature of the source since the previous report and the total annual quantities of materials used or air contaminants emitted.

C. DEVIATION REPORTING: [County Rule 210 §§302.1e & 305.1c]

The Permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions. Unless specified otherwise elsewhere in these Permit Conditions, an upset for the purposes of this Permit Condition shall be defined as the operation of any process, equipment or air pollution control device outside of either its normal design criteria or operating conditions specified in this Permit and which results in an exceedance of any applicable emission limitation or standard. The Permittee shall submit the report to the Control Officer within 2 working days from knowledge of the deviation. The report shall contain a description of the probable cause of such deviations and any corrective actions or

preventive measures taken. In addition, the Permittee shall report within a reasonable time of any long-term corrective actions or preventative actions taken as the result of any deviations from permit requirements.

All instances of deviations from the requirements of this Permit shall also be clearly identified in the semiannual monitoring reports required in the Specific Condition section of these Permit Conditions.

D. EMERGENCY REPORTING: [County Rule 130 §402.4]

(NOTE: Emergency Reporting is one of the special requirements which must be met by a Permittee wishing to claim an affirmative defense under the emergency provisions of County Rule 130. These provisions are listed earlier in these General Conditions in the section titled "Emergency Provisions". Since it is a form of deviation reporting, the filing of an emergency report also satisfies the requirement of County Rule 210 to file a deviation report.)

The Permittee shall, as soon as possible, telephone the Control Officer giving notice of the emergency, and submitted notice of the emergency to the Control Officer by certified mail, facsimile, or hand delivery within 2 working days of the time when emission limitations were exceeded due to the emergency. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.

E. EMISSION STATEMENTS REQUIRED AS STATED IN THE ACT:

[County Rule 100 §503]

Upon request of the Control Officer and as directed by the Control Officer, the Permittee shall provide the Control Officer with an emission statement, in such form as the Control Officer prescribes, showing measured actual emissions or estimated actual emissions of NO_x and volatile organic compounds (VOC) from that source. At a minimum, the emission statement shall contain all information contained in the "Guidance on Emission Statements" document as described in the USEPA's Aerometric Information Retrieval System (AIRS) Fixed Format Report (AFP 644). The statement shall contain emissions for the time period specified by the Control Officer. Statements shall be submitted annually.

F. EXCESS EMISSIONS REPORTING: [County Rule 140 §500] [locally enforceable only]

(NOTE: This reporting subsection is associated with the requirements listed earlier in these General Conditions in the section titled "Excess Emissions".)

1) The owner and/or operator of any source shall report to the Control Officer any emissions in excess of the limits established by the County or SIP Rules or by these Permit Conditions. The report shall be in two parts as specified below:
   a) Notification by telephone or facsimile within 24 hours of the time when the owner and/or operator first learned of the occurrence of excess emissions that includes all available information from paragraph 2) of this Permit Condition.
   b) Detailed written notification by submission of an excess emissions report within 72 hours of the notification required by paragraph 1) a) of this Permit Condition.

2) The excess emissions report shall contain the following information:
   a) The identity of each stack or other emission point where the excess emissions occurred;
   b) The magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;
   c) The time and duration or expected duration of the excess emissions;
   d) The identity of the equipment from which the excess emissions emanated;

e) The nature and cause of such emissions;
f) The steps taken, if the excess emissions were the result of a malfunction, to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions;
g) The steps that were or are being taken to limit the excess emissions; and
h) If this Permit contains procedures governing source operation during periods of startup or malfunction and the excess emissions resulted from startup or malfunction, a list of the steps taken to comply with the Permit procedures.

3) In the case of continuous or recurring excess emissions, the notification requirements of this Permit Condition shall be satisfied if the source provides the required notification after excess emissions are first detected and includes in the notification an estimate of the time the excess emissions will continue. Excess emissions occurring after the estimated time period or changes in the nature of the emissions as originally reported shall require additional notification pursuant to paragraphs 1) and 2) of this Permit Condition.

G. OTHER REPORTING: [County Rule 210 §302.1h(5)]
The Permittee shall furnish to the Control Officer, within a reasonable time, any information that the Control Officer may request in writing to determine whether cause exists for revising, revoking and reissuing this permit, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to the Control Officer copies of records required to be kept by this Permit. For information claimed to be confidential, the Permittee shall furnish a copy of such records directly to the Administrator of the USEPA along with a claim of confidentiality as covered elsewhere in these Permit Conditions.

17. RIGHT TO ENTRY AND INSPECTION OF PREMISES:

The Control Officer, during reasonable hours, for the purpose of enforcing and administering County Rules or any provision of ARS relating to the emission or control prescribed pursuant thereto, may enter every building, premises, or other place, except the interior of structures used as private residences. Every person is guilty of a petty offense under ARS §49-488 who in any way denies, obstructs or hampers such entrance or inspection that is lawfully authorized by warrant.
[County Rule 100 §105]

The Permittee shall allow the Control Officer or his authorized representative, upon presentation of proper credentials and other documents as may be required by law, to:

A. Enter upon the Permittee's premises where a source is located or emissions-related activity is conducted, or where records are required to be kept under the conditions of the permit;
[County Rule 210 §305.1f] [SIP Rule 43]

B. Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
[County Rule 210 §305.1f] [SIP Rule 43]

C. Inspect, at reasonable times, any sources, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
[County Rule 210 §305.1f] [SIP Rule 43]

D. Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and
[County Rule 210 §305.1f] [SIP Rule 43]

E. To record any inspection by use of written, electronic, magnetic, and photographic media.
[County Rule 210 §305.1f] [Locally enforceable only]

SPECIFIC CONDITIONS:

18. ALLOWABLE EMISSIONS LIMITATIONS

The allowable emission limitations of these Permit Conditions are based upon the facility as presently constructed and operated. They do not provide for facility changes or changes in the method of operation that would otherwise trigger new applicable requirements including New Source Review (NSR) or Best Available Control Technology (BACT).

A. Facility-Wide Requirements

1) The Permittee shall limit the emissions from the facility in accordance with the following table:

Pollutant	Monthly Limit, Tons	Rolling 12 Month Limit, Tons
Volatile Organic Compounds	20.0	99.0
Particulate Matter 10 Microns and Smaller	2.3	23.0
Any Single Federally Listed Hazardous Air Pollutant (HAP)	1.0	3.5
Total of All Federally Listed Hazardous Air Pollutants (HAPs)	2.0	7.0

The rolling 12 month limit shall be calculated by summing the monthly emissions for the most recent 12 calendar months.

[County Rule 210 §301.8b][County Rule 240]

2) Particulate Matter Limits

Wood Furniture Manufacturing

a) The Permittee shall not discharge or cause or allow the discharge of particulate matter into the ambient air from any affected operation in excess of the allowable hourly emission rate determined by the following equation:

$$E = 3.59\ P^{0.62}$$ **Equation (1)**

Where:
E = Emissions in pounds per hour, and
P = Process weight rate in tons per hour.

[County Rule 311 §301.1][SIP Rule 311 §301.1]

The total process weight from all similar operations at a facility, plant or premises shall be used for determining the maximum allowable emissions of particulate matter.

[County Rule 311 §302][SIP Rule 311 §302]

b) In the event that the Permittee may exceed the applicable standard set forth in County Rule 311 §301.1 and above, the Permittee may comply by installing and operating an approved emission control system. The emission control system(s) for particulate matter installed on the facility on the effective date of this permit and listed in the equipment list is an approved emission control system.

[County Rule 311 §304][SIP Rule 311 §304]

3) Opacity Limits

a) The Permittee shall not discharge into the ambient air from any single source of emissions any air contaminant, other than uncombined water, in excess of 20 percent opacity, except as provided in County Rule 300 §302.

[County Rule 300 §§301 and 302][locally enforceable only]

b) Except as otherwise provided in Regulation I, Rule 4, Exceptions, the opacity of any plume or effluent from any source of emissions, other than uncombined water, shall not be greater than 40 percent opacity as determined by Reference Method 9 in the Arizona Testing Manual.

[SIP Rule 30]

19. OPERATIONAL LIMITATIONS AND STANDARDS

A. Facility-Wide Operational Requirements

1) The Permittee shall not emit gaseous or odorous air contaminants from equipment, operations or premises under his control in such quantities or concentrations as to cause air pollution.

[County Rule 320 §300][locally enforceable only]

2) Materials including, but not limited to, solvents or other volatile compounds, paints, acids, alkalis, pesticides, fertilizer and manure shall be processed, stored, used and transported in such a manner and by such means that they will not unreasonably evaporate, leak, escape or be otherwise discharged into the ambient air so as to cause or contribute to air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage or discharge, the installation and use of such control methods, devices or equipment shall be mandatory.

[County Rule 320 §302][SIP Rule 32C]

3) Where a stack, vent or other outlet is at such a level that air contaminants are discharged to adjoining property, the Control Officer may require the installation of abatement equipment or the alteration of such stack, vent, or other outlet to a degree that will adequately dilute, reduce or eliminate the discharge of air contaminants to adjoining property.

[County Rule 320 §303][SIP Rule 32D]

B. Operational Requirements for Woodworking Equipment Vented Outdoors

The Permittee shall install, operate and maintain an approved emission control device on all wood working equipment vented outdoors. Such woodworking equipment shall be vented to the device without bypass.

[County Rule 100 §301][County Rule 241 §302] [SIP Rule 3]

C. Operational Requirements for Baghouses

1) The Permittee shall operate and maintain each baghouse in accordance with the requirements of the Operations and Maintenance (O&M) Plan for that piece of equipment most recently approved in writing by the control officer.

[County Rule 210 §302.1c][County Rule 311 §305][SIP Rule 311 §306]

2) Measurement of a pressure differential outside of the applicable parametric range of 1.0 to 8.0 inches of water shall require the Permittee to investigate and take corrective action if necessary to bring the control device into proper operation.

[County Rule 241§302][SIP Rule 3]

3) The Permittee shall operate the baghouses with a particulate matter control efficiency of

99.5% or greater or, if this efficiency is not demonstrated during the emission tests required by these Permit Conditions, the Permittee may demonstrate compliance with Rule 311 using the emission rates from the baghouses as determined by the testing required by these permit conditions.

D. Operational Requirements for Spray Coating Equipment

[County Rule 315 §301][locally enforceable only]

1) The Permittee shall not use or operate any spray painting or spray coating equipment unless one of the following conditions is met:
   a) The Permittee shall not operate spray coating equipment outside of a building unless it is operated inside an enclosure which has at least three sides a minimum of eight feet in height and able to contain any object(s) being coated.
      (1) For three-sided enclosures, the Permittee shall direct the spray in a horizontal or downward pointing manner so that overspray is directed at the walls or floor of the enclosure. No spraying shall be conducted within three feet of any open end and/or within two feet of the top of the enclosure.
      (2) For enclosures with three sides and a roof, or for complete enclosures, the Permittee shall direct the spray into the enclosure so that the overspray is directed away from any opening in the enclosure. No spraying shall be conducted within three feet of any open end and/or within two feet of any open top of the enclosure.
   b) The Permittee shall install and operate a filtering system on any spray booth or enclosure with forced air exhaust.
      (1) The filtering system shall have an average overspray removal efficiency of at least ninety-two percent (92%) by weight, as specified in writing by the manufacturer, for the type of material being sprayed.
      (2) No gaps, sags or holes shall be present in the filters and all exhaust must be discharged into the atmosphere. Spray booths or enclosures utilizing a water curtain shall be operated such that the water curtain is distributed uniformly across the entire surface area of the booth.

      [County Rule 315 §301.2] [locally enforceable only]

2) The controls required for spray coating in County Rule 315 §301, and the conditions of this Permit based upon that requirement, above, shall not apply:
   a) To the spray coating of buildings or dwellings, including appurtenances and any other ornamental objects that are not normally removed prior to coating;
   b) To the spray coating of facility equipment or structures which are fixed in a permanent location and cannot easily be moved into an enclosure or spray booth and which are not normally dismantled or moved prior to coating;
   c) To the spray coating of objects which cannot fit inside of an enclosure with internal dimensions of 10'W x 25'L x 8'H;
   d) To enclosures and spray booths and exhausts located entirely in a completely enclosed building, providing that any vents or openings do not allow overspray to be emitted into the outside air; or
   e) To any coating operations utilizing only hand-held aerosol cans.

   [County Rule 315 §302][locally enforceable only]

E. Operational Requirements for Coating Wood Furniture and Fixtures

1) VOC Content Limitation [County Rule 342 §301.1][SIP Rule 342 §301.1]
The Permittee shall not apply a topcoat or sealer to wood furniture or fixtures unless the VOC content is limited either to the pounds of VOC per pound of solids (kilogram VOC

per kilogram of solids) in Column A, or to the grams of VOC per liter in Column B of Table 342-1 below, unless covered by an exemption listed in these permit conditions.

Table 342-1: General VOC Limits of Coatings

Type of Coating	Column A (pounds of VOC per pound of solids)	Column B (grams of VOC per liter, less non-precursor compounds and water)
Topcoat	1.8	635
Sealer	1.9	645
Acid-cured, alkyd amino topcoat	2.0	655
Acid-cured, alkyd amino vinyl sealer	2.3	680

2) When a sealer's topcoat does not exceed 0.8 pound of VOC per pound of solids (0.8 kilogram of VOC per kilogram of solids), there is no limit on the VOC content of the sealer.

[County Rule 342 §301.1b][SIP Rule 342 §301.1b]

3) Stains, washcoats, glazes, toners, inks, and other coatings not specified in Table 342-1 or the strippable booth coating requirements of these Permit Conditions, do not have limits on VOC content.

[County Rule 342 §301.1c][SIP Rule 342 §301.1c]

4) The Permittee shall not use a strippable booth coating unless, as applied, the coating has no more than 0.8 pounds of VOC per pound of solids or no more than 3.0 pounds of VOC per gallon (360 grams per liter), less non-precursor volatile compounds.

[County Rule 342 §301.2][SIP Rule 342 §301.2]

5) Spray Equipment Requirements for Coating Wood Furniture and Fixtures

a) The Permittee shall not spray wood furniture with coating exceeding 1.0 pound of VOC per pound of solids (1.0 kilogram of VOC per kilogram of solids) without providing evidence of possession and use of a low-pressure spray gun or system, an electrostatic system, or a system in which the energy for atomization is provided principally via hydraulic pressure; this includes air assisted airless and ultra-low-volume-air assisted technologies. Such requirement does not apply to any facility, activity or person specifically exempted by applicable subsections of County Rule 342 § 307, or to any specific system that is approved by the Administrator as having a transfer efficiency consistently exceeding 64 percent.

[County Rule 342 §302.1][SIP Rule 342 §302.1]

b) The Permittee shall not use a conventional air-atomized spray gun or other restricted use gun, except:

(1) To apply finishing materials that have a VOC content not exceeding 1.0 pound of VOC per pound of solids (1.0 kilogram of VOC per kilogram of solids).

[County Rule 342 §302.2a] [SIP Rule 342 §302.2a]

(2) For touch-up and repair under either of the following conditions:

(a) Such application is performed after completion of the entire finishing

operation; or

(b) Such application is performed after applying stain and before any further coating, by equipment having a total capacity not exceeding 2.1 gallons (or 8 liters).

[County Rule 342 §302.2c] [SIP Rule 342 §302.2c]

(3) To apply less than five percent (5%) of all coating pursuant to County Rule 342 §307.2.e.

[County Rule 342 §302.2d] [SIP Rule 342 §302.2d]

c) The Permittee shall operate and maintain in proper working order all process equipment in which VOC-containing materials are used or stored.

[County Rule 342 §303][SIP Rule 342 §303]

6) Booth Cleaning [County Rule 342 §304.1][SIP Rule 342 §304.1]

a) The Permittee shall not clean spray booth components using a solvent containing more than 8.0 percent by weight of VOCs, including water and non-precursor compounds, except for: conveyors, continuous coaters and their enclosures, and metal filters.

b) If the spray booth coating is being replaced, the Permittee shall use no more than 1.0 gallon (3.8 liters) VOC- solvent to clean the booth.

7) Cleaning Guns and Lines [County Rule 342 §304.2][SIP Rule 342 §304.2]

The Permittee shall collect all solvent used to clean spray guns and shall pump or drain all solvent used for line cleaning into non-leaking container(s). Such containers shall be immediately closed or covered after all the solvent has been collected, and shall remain so except when in use.

8) Handling and Disposal of VOC [County Rule 342 §305] [SIP Rule 342 §305]

a) The Permittee shall cover and keep covered each VOC-containing material intended for the day's production, which is not currently in use. The Permittee shall store finishing and cleaning materials in closed containers.

b) The Permittee also shall store all VOC-containing materials, including but not limited to rags, waste coatings, waste solvents and their residues, in closed containers which are legibly labeled with their contents and which remain covered when not in use.

9) Exemptions from VOC Requirements for Coating Wood Furniture and Fixtures

[County Rule 342 §§307 and 403][SIP Rule 342 §§307 and 403]

a) Total Exemption:

The following materials are exempt from the requirements of this Permit which are based on County Rule 342: adhesives, architectural coatings, printing ink, and coatings not applied on or over a wood-product substrate.

b) Partial Exemptions:

(1) Coatings in aerosol spray cans not exceeding 22 fl. oz. (0.66 liter) capacity used exclusively for touch-up and/or repairs are exempt from all requirements of Section 300 of County Rule 342 and the conditions of this permit that are based upon those requirements.

(2) The following shall be exempt from the requirements of County Rule 342 §§301 and 302 and the conditions of this permit that are based upon those

requirements:

(a) Prepackaged aerosol spray cans which are not used for touch-up or repair, metal leaf finishes, and faux finishes do not have limits on VOC content when the annual total use of all such coating types together is less than 250 gallons (948 liters).

(b) Any refinishing operation necessary for preservation, to return the furniture or fixture to original condition, to replace missing furniture to produce a matching set, or to produce custom replica furniture.

(3) The coating for a single resin-layer finish which does not exceed a VOC limit of 3 pounds of VOC per pound of solids for completed finishes up to 3 dry mils thickness or does not exceed 2.3 pounds of VOC per pound of solids for finishes over 3 dry mils is exempt from the requirements of County Rule 342 §301.1 and the conditions of this Permit that are based upon those requirements if all of the following conditions are met:

(a) The containers are clearly marked: "FOR USE IN SINGLE RESIN-LAYER FINISH,"

(b) Facility records clearly identify this material: "DOES NOT MEET THE VOC LIMITS OF SECTION 301, RULE 342 - FOR USE ONLY IN SINGLE RESIN-LAYER FINISHES," and

(c) The booth used to apply a single resin-layer finish above 2.3 pounds of VOC per pound of solids is dedicated to that operation only, and is clearly labeled: "FOR SINGLE RESIN-LAYER FINISHES ONLY."

(4) In addition to the uses of restricted-use guns allowed under County Rule 342 §302.2 and the conditions of this permit based upon that requirement, the Permittee may use a conventional air atomized or other restricted use gun to apply coatings exceeding 1 lb VOC/lb if all the following conditions are met:

(a) The volume of such coating applied in this way is less than five percent (5%) of the total volume of coating applied at the facility;

(b) Each gun has a red tag when spraying materials exceeding 1.0 pound of VOC per pound of solids. The red tag shall be a red 4 square-inch vivid, durable tag, sticker, or painted emblem/label visible on the gun or within 3 feet of the gun on the gun's hose;

(c) A log shall be kept of the amount of coating used by each such gun pursuant to the Recordkeeping Requirements of these Permit Conditions.

20. MONITORING AND RECORDKEEPING REQUIREMENTS

A. Facility-Wide Requirements [County Rule 210 §302.1c]

1) Monitoring for VOC limits:

The Permittee shall monitor for compliance with the facility-wide VOC emissions limits of these Permit Conditions by calculating and recording the monthly and the rolling 12 month emissions of VOCs. All VOCs in the materials used in the woodworking operations are assumed to be emitted into the atmosphere unless records acceptable to the Control Officer are kept documenting the quantity and VOC content of VOC containing materials destroyed in an approved emission control device (ECS) and/or disposed of off site. The Permittee shall maintain specification sheets or technical data sheets documenting the VOC content of all VOC containing materials used in the woodworking process. The 12 month rolling emissions total shall be calculated by summing the emissions for the most recent complete 12 calendar months. To determine the frequency required for VOC recordkeeping, an additional 11 month rolling total of VOC emissions shall also be calculated by summing the emissions for the most recent 11 calendar months. The VOC emissions from the facility for the monthly and rolling monthly totals shall be based upon the actual usage of VOC containing materials during the applicable period and shall be recorded and calculated as follows:

Rolling 11 month emission rate, tons VOCs	Required frequency of recordkeeping and emissions calculations	Deadline to perform emission calculations after usage
Upon initial permit issuance and anytime thereafter that it is 79.0 or less	Monthly	By the 15th of the following month
Greater than 79.0 but less than 90.0	Weekly	By the end of the following week
90.0 or greater	Daily	By the end of the second business day

2) Monitoring for HAPs limits

The Permittee shall monitor for compliance with the facility-wide limits of these Permit Conditions for federally listed hazardous Air Pollutants (HAPS) by monthly calculating and recording the monthly and the rolling 12 month emissions of HAPs. All HAPs in the materials used in the woodworking operations are assumed to be emitted into the atmosphere unless records acceptable to the Control Officer are kept documenting the quantity and HAPs content of HAPs containing materials disposed of off site. The Permittee shall maintain specification sheets or technical data sheets supplied by the manufacturer specifying the HAPs content of all HAPs containing materials used in the woodworking process. The 12 month rolling emissions total shall be calculated by summing the emissions for the most recent complete 12 calendar months. The monthly and rolling monthly total emissions of HAPs from the facility shall be based upon the actual usage of HAPs containing materials during the applicable period and shall be calculated no later than the 15th of the following month.

3) Opacity Readings

a) Opacity shall be determined by observations of visible emissions conducted in accordance with 40 CFR Part 60 Appendix A, Method 9.
[40 CFR 60.11.b][County Rule 300 §501]

b) Opacity of visible emissions from intermittent sources as defined by County Rule 300 §201 shall be determined by observations conducted in accordance with 40 CFR Part 60 Appendix A, Method 9, except that at least 12 rather than 24 consecutive readings shall be required at 15-second intervals for the averaging time.
[County Rule 300 §502][Locally enforceable only]

3) Odor Log
[County Rule 100 §301] [County Rule 210 §302.1.c.(2)] [locally enforceable only]
The Permittee shall maintain a log of complaints of odors detected off-site. The log shall contain a description of the complaint, date and time that the complaint was received, and if given, name and/or phone number of the complainant. The logbook shall describe what actions were performed to investigate the complaint, the results of the investigation, and any corrective actions that were taken.

4) Material Usage [County Rule 311 §502.2] [SIP Rule 311 §502.2]
These records shall be updated each day of operation and include at a minimum the following information: a record of the total weight of all process materials including raw materials, additives, fuels, etc., which are put into a process flow at the beginning of each batch process shall be kept on site. This shall include all materials which participate in the process and are changed in mass, form, state or in other characteristics by means of their interaction in the given process. The duration of each separate batch process shall also be recorded.

a) Batch process records: Maintain a record of the total weight of all process materials including raw materials, additives, and fuels which are put into a process flow at the beginning of each batch process shall be kept. This shall include all materials which participate in the process and are changed in mass, form, state or in other characteristics by means of their interaction in the given process. The duration of each separate batch process shall also be recorded.

b) Continuous or semi-continuous process records: Maintain a daily record of the weight of all process material entering into each process including raw materials, additives, fuels, the start time and the duration of each process run. In addition to the foregoing, records shall be kept for processes which run continuously for more than 24 hours. Such records shall include the total weight of any material entering into the process over the entire duration of the process run from start up to shut down and the total elapsed time of operation.

B. Monitoring and Recordkeeping Requirements for Baghouses Vented Outdoors that Serve Woodworking Equipment

1) The Permittee shall record the following information for all visible emissions observations and Method 9 opacity readings required by this permit condition:

a) The date and time the visible emissions observation or Method 9 opacity reading was taken;

b) The name of the observer;

c) Whether or not visible emissions were present;

d) If visible emissions are present and the controls and facility processes are operating in a mode other than their normal operating conditions, such as startup or shutdown, a description of the operating conditions at the time that the opacity is observed;

e) The opacity determined by a Method 9 opacity reading, if a Method 9 reading is required by these permit conditions;
f) If applicable, a description of any corrective action(s) taken, including the date of such action(s); and
g) Any other related information.

[County Rule 300] [County Rule 210 §302.1]

2) Daily visible emissions observations shall be performed for each operating baghouse every day that the facility operates.

[County Rules 300] [County Rule 210 §302.1c]

3) If visible emissions, other than uncombined water, are observed being discharged into the ambient air, the Permittee shall monitor for compliance with the opacity standards specified in this permit by having a certified visible emissions evaluator determine the opacity of the visible emissions being discharged into the ambient air using the techniques specified in EPA Reference Method 9.

If the Permittee observes visible emissions, the initial Method 9 opacity reading shall be taken within twenty-four (24) hours of observing visible emissions. If the emitting equipment is not operating on the day that the initial Method 9 opacity reading is required to be taken, then the initial Method 9 opacity reading shall be taken the next day that the emitting equipment is in operation. If the problem causing the visible emissions is corrected before the initial Method 9 opacity reading is required to be performed, and there are no visible emissions (excluding uncombined water) observed from the previously emitting equipment while the equipment is in normal operation, the Permittee shall not be required to conduct the Method 9 opacity readings.

Follow-up Method 9 opacity readings shall be performed by a certified visible emissions evaluator while the emitting equipment in its standard mode of operation in accordance with the following schedule:

(a) Daily:
  (1) Except as provided in paragraph 3 of this Permit Condition, a Method 9 opacity reading shall be conducted each day that the emitting equipment is operating until a minimum of 14 daily Method 9 readings have occurred.
  (2) If the Method 9 opacity readings required by this Permit Condition are less than 20% for 14 consecutive days, the frequency of Method 9 opacity readings may be decreased to weekly, in accordance with paragraph 2 of this Permit Condition.

(b) Weekly:
  (1) If the Permittee has obtained 14 consecutive daily Method 9 readings which do not exceed 20% opacity, the frequency of Method 9 readings may be decreased to once per week for any week in which the equipment is operated.
  (2) If the opacity measured during a weekly Method 9 reading exceeds 20%, the frequency of Method 9 opacity readings shall revert to daily, in accordance with paragraph 1 of this Permit Condition.
  (3) If the opacity measured during the required weekly Method 9 readings never exceeds 20%, the Permittee shall continue to obtain weekly opacity readings until the requirements of paragraph 3 of this Permit Condition are met.

(c) Cease Follow-up Method 9 Opacity Monitoring:
Regardless of the applicable monitoring schedule, follow-up Method 9 opacity readings may cease if the emitting equipment, while in its standard mode of

operation, has no visible emissions, other than uncombined water, during every observation taken during a Method 9 procedure.

[County Rule 210 §302.1c]

4) If visible emissions are observed from the baghouses and the problem isn't corrected within twelve (12) hours of the observation the Permittee shall investigate the problem, document the findings, and provide a description of the corrective action taken to bring the control device into proper operation. In addition the Department may require the Permittee to submit a Corrective Action Plan (CAP).

[County Rule 200 § 309]

5) The Control Officer may require the CAP contain one or more of the following elements:
   a) Improved preventive maintenance practices.
   b) Improved baghouse operating practices.
   c) Process operation changes.
   d) Other actions appropriate to improve baghouse performance.
   e) Schedule for CAP implementation and periodic reporting on the progress of CAP implementation.

[County Rule 200 § 309]

6) Daily pressure differential readings shall be performed and recorded for each baghouse every day that the facility operates. The most recently approved O&M Plan requires the baghouse pressure differential to be between 1.0 to 8.0 inches of water. The Permittee shall log all pressure differential readings, including the date when the reading was taken, identify each baghouse, name or initials of the person who took the reading, and any other related information. The Permittee shall investigate the cause of any reading outside the range of 1.0 to 8.0 inches of water immediately to identify, correct or repair the problem and record in a log book the cause of the problem and the corrective action initiated to remedy the abnormal pressure differential reading.

[County Rule 311 S§305 & 502.3]

Within three months of the permit's issue date, the Permittee shall submit recordkeeping data of the differential pressure readings from each baghouse to support the differential pressure range Records submitted shall be from the previous two-year period. The Permittee shall submit at minimum, ten separate calendar day records for each baghouse.

[County Rule 200 § 309]

7) If the frequency of measurement of a pressure differential outside the applicable pressure differential range of 1.0 to 8.0 inches of water or other information indicate that the baghouse is not being operated in accordance with the O&M plan most recently approved by the Control Officer, the Department may require the Permittee to submit a Corrective Action Plan (CAP).

[County Rule 200 § 309]

C. Monitoring and Recordkeeping Requirements for Spray Coating

[County Rule 210 §§302.1d and 302.1e] [County Rule 315]

1) Spray booths with dry filter systems:
   If a spray booth is equipped with a dry filter system, the Permittee shall inspect each filter installed on a spray booth or enclosure, for gaps, sags or holes each day of operation.
   a) Should the Permittee observe any gaps, sags or holes in any of the filters, the Permittee shall immediately repair or replace the filter. For each inspection, the

Permittee shall record the name of the inspector, the location of filtering system containing the filter (if more than one spray booth), and the date that the filter was replaced.

b) If no gaps, sags or holes are observed in any of the filters, the Permittee shall record the name of the inspector, the location of the filtering system containing the filter (if more than one spray booth), and the date that the filter was inspected.

The Permittee shall maintain on file and make available to the Control Officer upon request, a copy of the manufacturer's specifications verifying that the average overspray removal efficiency for the filter system is at least ninety-two percent (92%).

2) Spray booths with water curtain filter systems:
If a spray booth is equipped with a water curtain type of filter system, the Permittee shall inspect the booth on each day of operation to ensure that the water curtain is uniformly distributed across the entire surface of the booth face. If the spray booth does not have a uniform distribution of the water curtain, The Permittee shall immediately investigate the cause to identify, correct or repair the problem. For each daily inspection, the Permittee shall record the name of the inspector, the identification of the spray booth, the result of the inspection, a description of any problems observed, the cause of the problem and the corrective action initiated to remedy any problems.

D. Monitoring and Recordkeeping Requirements for Coating Wood Furniture and Fixtures

1) The Permittee shall keep the following records and lists in a consistent and complete manner and shall make them available to the Control Officer without delay during normal business hours. Each record shall be maintained for a minimum of five years.

a) Current List of VOC Containing Material
The Permittee shall maintain a current list of all VOC-containing material which contains the name or code of each material and its VOC content, expressed in accordance with County Rule 342 §§501.1b and 501.1c. Any qualified single resin-layer finish shall be identified as such.

b) Current List of Mix Ratios
The Permittee shall maintain a current list of the manufacturer's recommended mix ratio of components, including but not limited to addition of reducers and catalysts/hardeners, except when the manufacturer has no recommendations for any additions.

[County Rule 342 §501][SIP Rule 342 §501]

2) The Permittee shall maintain daily records indicating the amount and VOC content of each day's use of each topcoat, sealer, or booth material that exceeds applicable VOC limits contained in County Rule 342 §§301 or 304 and the conditions of this Permit based upon those requirements. The records shall be logged and totaled by the end of the following workday. VOC content shall be entered for each such material.

[County Rule 342 §501.2a][SIP Rule 342 §501.2a]

3) The Permittee shall maintain the following monthly records for material compliant with County Rule 342 §§301 and 304, and the conditions of this Permit based upon those requirements, and shall update such records prior to the conclusion of the following month:

a) For each topcoat and sealer to which reducer is added at any time after its arrival at a facility, enter the VOC content in lb VOC/lb Solids or in grams/liter (lb/gal) less water and non-precursor organic compounds.

b) The amount of coating, the amount of catalyst/hardener, and the amount of

reducer/coating diluent used.

c) The quantity and type of organic solvent used each month for stripping and cleaning.

d) The quantity of organic solvent disposed of offsite during the month just ended.

e) Exception: The Permittee shall update yearly the totals of usage of each VOC-containing material known to be used in quantities less than 15 gallons (or 57 liters) per year.

[County Rule 342 §501.2b][SIP Rule 342 §501.2b]

The Permittee shall not be required to maintain records of the VOC content of any mixture of any coatings regulated by County Rule 342 as long as no individual coating in the mixture exceeds the VOC limits for coatings in Table 342-1. If any diluent, as defined in County Rule 342 §211, is mixed with a coating regulated by Table 342-1, and the diluent has a VOC content in excess of the maximum VOC content of the coating allowed by Table 342-1, records of the mixture shall be kept according to County Rule 342 §501.2b.

[County Rule 210 §302.1c]

4) The Permittee shall keep records on the use of conventional air-atomized spray equipment and other restricted-use guns associated with County Rule 342 §302 and the conditions of this Permit based on those requirements. The records shall be kept according to the following:

a) A log shall be kept of the amount of coating exceeding 1 pound of VOC per pound of solid used by each conventional air-atomized or other restricted use gun. This log shall be updated daily or each time coating is added to the gun's coating reservoir.

[County Rule 342 §307.2e(3)][SIP Rule 342 §307.2e(3)]

b) Records shall show for each semi-annual period the total volume (VR) of coatings used during that semi-annual period exceeding 1.0 pound of VOC per pound of solids (or 1.0 kilogram of VOC per kilogram of solids) applied with conventional air-atomized spray equipment and other restricted-use guns.

[County Rule 342 §501.2c][SIP Rule 342 §501.2c]

c) Records shall show for each semi-annual period the total volume of all finishing materials (AMV) used throughout the facility.

[County Rule 342 §501.2c][SIP Rule 342 §501.2c]

d) The total volume (VR) so applied over the previous six months shall be divided by the total of all coatings used in the same period (AMV) and these calculations and the result shall be entered in the log.

[County Rule 342 §501.2c][SIP Rule 342 §501.2c]

5) The Permittee shall maintain records of disposal/recovery of all VOC containing materials.

[County Rule 342 §501.3][SIP Rule 342 §501.3]

21. REPORTING REQUIREMENTS

NOTE: Additional reporting requirements other sections of these Permit Conditions such as the general conditions and in each section of the Specific Conditions for Potential Support Activities.

Semi-Annual Monitoring Report

The Permittee shall file semiannual monitoring reports with the Control Officer, Attn: Large Source Compliance Supervisor. The initial reporting period shall begin on the permit issuance date and shall cover a period of 6 months or less. The second and subsequent reporting periods shall be in 6 month intervals after the end of the initial reporting period. The semiannual monitoring reports shall be filed by the end of the month following the reporting period. Each semiannual monitoring report shall also contain the following information at a minimum for the applicable reporting period:

[County Rule 210 §302.1 e (1)]

A. Emissions Calculations [County Rule 210 §302.1e]

The Permittee shall include the results of the monthly and the rolling 12-month emissions calculations for each month in the six-month reporting period.

B. Deviation Reporting [County Rule 210 §302.1e(1)]

The Permittee shall identify all instances of deviations from these permit conditions. The Permittee shall include the probable cause of such deviations, and any corrective actions or preventive measures taken.

C. Visible Emissions [County Rule 210 §302.1e][County Rule 311]

If visible emissions were observed during the reporting period:

1) Dates on which visible emissions were observations were taken;
2) Name of the observer;
3) Whether or not visible emissions were present;
4) The opacity of visible emissions determined by a Method 9 opacity reading, if applicable;
5) A description of any corrective actions taken, including the date such action was taken;
6) The name of individual certified as a visible emissions evaluator, the date of last certification, and company/agency providing the certification; and
7) Any other related information.

D. Spray Coating [County Rule 210 §302.1e][County Rule 315]

1) If the Permittee operates all spray coating equipment outside of a building and inside an enclosure without fixed air exhaust, the Permittee shall provide, if the facility was in compliance, a statement certifying the following:
   a) That the enclosure has at least three sides that are a minimum of eight feet in height;
   b) That no spraying was conducted within three feet of any open end, or within two feet of any open top of the enclosure; and
   c) That the spray is directed in a horizontal or downward pointing manner for three-sided enclosures, or away from any opening for complete enclosures and three-sided enclosures with roofs.
2) The Permittee shall provide a statement certifying that, if the facility was in compliance, and that spraying has not occurred outside of the paint booths and outside of a building.
3) If the Permittee operates spray coating equipment with a filtering system on a spray booth or enclosure with forced air exhaust, the Permittee shall provide, if the facility was in compliance, a statement certifying the following:
   a) That each filter installed on a spray booth or enclosure was inspected for gaps, sags or holes for each day of use;
   b) That all filters that were observed to have gaps, sags or holes were immediately replaced; and
   c) Details of the make and manufacturer of each filter used as well as its overspray control efficiency.
4) If the Permittee operates spray coating equipment with a water curtain system on a spray

booth or enclosure with forced air exhaust, the Permittee shall provide, if the facility was in compliance, a statement certifying the following:

a) That each water wash spray booth or enclosure was inspected for a uniform water curtain distribution across the entire surface of the booth face for each day of use;

b) That any non-uniform distribution was immediately investigated and, if adjustments or repairs were necessary to return to normal operation, that the adjusted or repaired were made as soon as possible.

5) If the Permittee cannot provide a positive certifications to any of the subsections of this Permit Condition, then the Permittee shall identify the situation(s) that prevents the positive certification and any corrective actions taken to prevent a reoccurrence.

[County Rule 201 §302.1e] [locally enforceable only][County Rule 210 §302.1e]

E. Coating Wood Furniture and Fixtures [County Rule 210 §302.1e][County Rule 342]

1) A list of coatings regulated by County Rule 342 that were used at the facility during the six month period, along with the VOC content of each coating.

2) If any conventional air-atomized or other restricted use guns were used during the six month period, a description of the exemption that applies to the use of such guns and justification for the exemption.

F. Odor Log

The Permittee shall include a copy of the portion of the odor log which covers the applicable 6 month reporting period in each of the semiannual compliance reports. If no complaints were received during the reporting period, a statement to that effect may be substituted for the copy of the odor log.

[County Rule 210 §302.1.e.(1)] [locally enforceable only]

22. TESTING REQUIREMENTS

Note: All the test protocols, notifications and reports required by this permit condition should be addressed to the attention of the Air Quality Technical Services Unit Manager.

A. The Permittee shall conduct a performance test to determine the emission rates of both the Fisher Klosterman 250 hp and the Donaldson Model 192HTP baghouses. The testing shall be performed within 6 months after the issuance date of this permit. The Permittee may choose to test either for the removal efficiency for particulates with an aerodynamic diameter of 10 microns or less or for the particulate matter emission rate to show compliance with these permit conditions and Rule 311. For the particulate matter emission rate option, the testing shall be conducted in accordance with EPA Test Method 5. Should the Permittee choose to test for the removal efficiency, the test shall be conducted in accordance with EPA Test Method 201A.

[County Rules 200 §309 and 270][SIP Rule 270]

B. Testing Conditions for the Anguil Rotor Concentrator with Thermal Oxidizer

The Permittee shall initially conduct the following performance tests on the recuperative thermal oxidizer with rotor concentrator (ECS) within 180 days after issuance of the Significant Modification S04-011. The Permittee shall then conduct reoccurring performance tests within 30 months from the previous test date.

1) The Permittee shall conduct all the required performance tests for each of the following operating scenarios;

a) Spray booth 3 vented alone to the ECS

b) Spray booth 4 vented alone to the ECS

c) Spray booth 7 vented alone to the ECS

d) Spray booths 3, 4 and 7 vented in combination to the ECS

[County Rules 200 §309 and 270][SIP Rule 270]

2) The performance test shall include;

a) The Permittee shall conduct a performance tests to determine the VOC capture efficiency of the spray booth(s) which are vented to the ECS. The performance test shall be conducted in accordance with EPA Test Method 204 or an applicable sub method. An alternative test method shall not be used unless approved in writing by the Control Officer and the Administrator.

[County Rules 200 §309 and 270][SIP Rule 270]

b) The Permittee shall conduct a performance tests to determine the VOC destruction efficiencies of the ECS. The performance tests shall be conducted in accordance with EPA Test Method 18, 25, and/or 25A. An alternative test method shall not be used unless approved in writing by the Control Officer and the Administrator.

[County Rules 200 §309 and 270][SIP Rule 270]

c) The Permittee shall conduct a performance tests to determine NOx emissions from the ECS. The performance tests shall be conducted in accordance with EPA Test Method 7E. An alternative test method shall not be used unless approved in writing by the Control Officer and the Administrator.

[County Rules 200 §309 and 270][SIP Rule 270]

d) The Permittee shall conduct a performance tests to determine CO emissions from the ECS. The performance tests shall be conducted in accordance with EPA Test Method 10. An alternative test method shall not be used unless approved in writing by the Control Officer and the Administrator.

[County Rules 200 §309 and 270][SIP Rule 270]

e) The Permittee shall conduct a performance test to determine the air flow rate from spray booth(s) in the duct work before the point of the combination of the three ducts using EPA Test Method 2 or 2A. An alternative test method shall not be used unless approved in writing by the Control Officer and the Administrator.

[County Rules 200 §309 and 270][SIP Rule 270]

C. Performance tests shall be conducted under such conditions as the Control Officer shall specify based upon representative operation of the source or facility. The Permittee shall make available to the Control Officer such records as may be necessary to determine the conditions of the performance tests. Operations during periods of start-up, shutdown, and malfunction shall not constitute representative conditions of performance tests unless otherwise specified in the applicable standard. Each baghouse and/or ECS shall be operated during testing in accordance with its approved O&M plan. For each baghouse, the pressure drop and visible emissions operational parameters shall be measurable and capable of later indication that the unit is operating within the permitted limits. For the ECS, the following operational parameters shall be measured during the performance tests: the combustion chamber temperature, combustion chamber set-point temperature, desorption loop temperature, the inlet plenum primary and secondary filter differential. These and any additional operational parameters shall be listed in the protocol and recorded during testing.

[County Rule 270 §403]

D. The Permittee shall submit separate test protocols for each baghouse and ECS to the Department for review and approval at least 30 days prior to each performance test.

[County Rule 270 §301.1]

E. The Permittee shall notify the Department in writing at least two weeks in advance of the actual dates and times and date of the performance tests so that the Department may have a representative attend.

[County Rule 270 §404]

F. The Permittee shall complete and submit a separate report for each baghouse and/or ECS to the Department within 30 days after completion of each performance test. The reports shall summarize the results of the testing in sufficient detail to allow compliance determinations to be made.

[County rule 270 §§301.1 & 401]

23. OTHER REQUIREMENTS

A. Compliance Plan [County Rule 210 §305.1g]

1) The Permittee shall replace the FKI quad cyclone dust collector with two FKI 312 baghouse dust collectors to ensure compliance with County Rule 311 in accordance with the following compliance schedule.

Compliance Schedule

Milestones	**Completion Date**
Control technology delivery.	9/7/2004
Installation of control technology.	1/15/2005
Start-up and debugging period.	2/15/2005
Remove FKI quad cyclone from service	7/1/2005
Restrict transfer cyclone usage to hogger only	7/1/2005

2) The Permittee shall submit a certified progress report to the Control Officer monthly to the Attn: Large Source Compliance Supervisor. The report shall contain, at a minimum, the following information:
   a) Dates when the milestones specified in the Milestone Table of this permit condition were achieved; and
   b) An explanation of why any dates in the schedule of compliance were not or will not be met, any preventive or corrective measures adopted.

3) Testing
   Note: All the test protocols, notifications and reports required by this permit condition should be addressed to the attention of the Air Quality Technical Services Unit Manager.

   a) The Permittee shall conduct performance tests to determine the PM_{10} removal efficiency or PM emission rate of the two new FKI Model 312 300 HP baghouses. Testing shall be performed and test results shall be submitted within 60 days after the baghouse reaches the ability to operate at their maximum capacity, but in no case later than 180 days after initial startup of the newly installed baghouse. The Permittee may choose to test either for the removal efficiency for PM_{10} removal efficiency or for the PM emission rates to show compliance with these permit conditions and Rule 311. For the PM emission rate option, the testing shall be conducted in accordance with EPA Test Method 5. Should the Permittee choose to test for the PM_{10} removal efficiencies, the test shall be conducted in accordance with EPA Test Method 201A.

   [County Rules 200 §309 and 270][SIP Rule 270]

b) Performance tests shall be conducted under such conditions as the Control Officer shall specify based upon representative operation of the source or facility. The Permittee shall make available to the Control Officer such records as may be necessary to determine the conditions of the performance tests. Operations during periods of start-up, shutdown, and malfunction of the baghouse shall not constitute representative conditions of performance tests unless otherwise specified in the applicable standard. Each baghouse shall be operated during testing in accordance with its approved O&M plan. The pressure drop and visible emissions operational parameters shall be measurable and capable of later indication that the unit is operating within the permitted limits. These and any additional operational parameters shall be listed in the protocol and recorded during testing.

[County Rule 270 §403]

c) The Permittee shall submit separate test protocols for each baghouse to the Department, for review and approval at least 30 days prior to each performance test.

[County Rule 270 §301.1]

d) The Permittee shall notify the Department in writing at least two weeks in advance of the actual dates and times of the performance tests so that the Department may have a representative attend.

[County Rule 270 §404]

e) The Permittee shall complete and submit a separate report for each baghouse to the Department within 30 days after completion of the performance tests. The reports shall summarize the results of the testing in sufficient detail to allow compliance determinations to be made.

[County rule 270 §§301.1 & 401]

B. Training Requirements [County Rule 210 §302.1.b]

The Permittee shall fully train the individual before they are allowed to operate and/or maintain any surface coating equipment. The training shall include but shall not be limited to equipment usage, maintenance, and applicable record keeping and reporting requirements. Refresher training shall be given at least once per year.

24. PERMIT CONDITIONS FOR THE ANGUIL ROTOR CONCENTRATOR WITH THERMAL OXIDIZER

Note: The following Permit Conditions are required to determine the capture and destruction efficiencies of VOC's in order to meet the annual and monthly emissions limitations. Any deviations from these permit conditions may be cause to disapprove the destruction efficiency of the ECS for emission calculations by the Control Officer

A. Allowable Operation Scenarios

1) The ECS not in operation and spray booths 3, 4 and 7 venting directly to the atmosphere.
2) The ECS in operation and spray booths 3, 4 and 7 venting to the ECS.
3) The ECS in operation and spray booth 3 venting to the ECS and spray booths 4 and 7 venting directly to the atmosphere.
4) The ECS in operation and spray booth 4 venting to the ECS and spray booths 3, and 7 venting directly to the atmosphere.
5) The ECS in operation and spray booth 7 venting to the ECS and spray booths 3 and 4

venting directly to the atmosphere.

6) The ECS in operation and spray booths 3 and 4 venting to the ECS and spray booth 7 venting directly to the atmosphere.
7) The ECS in operation and spray booths 3 and 7 venting to the ECS and spray booth 4 venting directly to the atmosphere.
8) The ECS in operation and spray booths 4 and 7 venting to the ECS and spray booth 3 venting directly to the atmosphere.

NOTE: Spray booths are not required to be vented to the ECS when not in use

[County Rule 210 §302.1b]

B. Operational Limitations for the ECS when in Operation

1) The Permittee shall install the monitoring devices necessary to confirm that the ECS is operating within the parameter limitations specified herein. The monitoring devices shall continuously monitor the date, time, and the required temperatures and pressure readings. The required monitoring shall be recorded to a tamper-proof electronic media storage device that can be immediately reproducible in hard copy format when requested by the Department.

(a) The Permittee shall operate and test the combustion chamber of the ECS at a set point temperature of 1425 º F. The combustion chamber temperature shall not operate at less then 1400 º F. Any deviation of these operating parameters during normal operation will require the Permittee to change all spray booths to the uncontrolled operating scenario until corrective action can be completed to return the ECS to proper operation.

[County Rule 210 §302.1b]

(b) The Permittee shall operate the desorption loop of the ECS at a temperature greater than or equal than 350º F but less than 450 º F. Any deviation of this operating parameter during normal operation will require the Permittee to change all spray booths to the uncontrolled operating scenario until corrective action can be completed to return the ECS to proper operation.

[County Rule 210 §302.1b]

(c) The Permittee shall not operate the ECS if;

(1) The differential pressure at the inlet plenum primary filter is greater than 2" WC or
(2) The differential pressure set point for inlet plenum secondary filter is greater than 2.5" WC

Any deviation of these operating parameters during normal operation will require the Permittee to change all spray booths to the uncontrolled operating scenario until corrective action can be completed to return the ECS to proper operation.

[County Rule 210 §302.1b]

2) The Permittee shall use only natural gas or propane to supplement the captured VOCs as fuel for the thermal oxidizer

[County Rule 241 §302][Locally enforceable only]

3) The Permittee shall not exceed the following emission limitations for the exhaust of the recuperative thermal oxidizer:
Carbon monoxide, CO: 350 ppmvd @ 15% oxygen
Oxides of nitrogen, NOx: 50 ppmvd @ 15% oxygen

[County Rule 241 §302][Locally enforceable only]

4) The air flow rate from spray booths 3, 4 and 7 in the duct work before the combination of the three ducts shall be greater than 9000 cfm but less than 11000 cfm. Any deviation of this operating parameter during normal operation will require the Permittee to change all spray booths to the uncontrolled operating scenario until corrective action can be completed to return the ECS to proper operation.

[County Rule 210 §302.1b]

5) The variable frequency drive for the absorption fan (VFD 105) shall operate within the following parameters;
   (a) With one spray booth venting to the ECS, the VFD 105 shall operate between 21 to 27 Hertz (Hz)
   (b) With two spray booths venting to the ECS, the VFD 105 shall operate between 26 to 35 Hz
   (c) With three spray booths venting to the ECS, the VFD 105 shall operate between 38 to 55 Hz

   Any deviation of this operating parameter during normal operation will require the Permittee to change all spray booths to the uncontrolled operating scenario until corrective action can be completed to return the ECS to proper operation.

[County Rule 210 §302.1b]

6) The variable frequency drive for the desorption fan (VFD 550) shall operate within 34 to 42.0 Hz. Any deviation of this operating parameter during normal operation will require the Permittee to change all spray booths to the uncontrolled operating scenario until corrective action can be completed to return the ECS to proper operation.

[County Rule 210 §302.1b]

7) The Permittee shall operate the recuperative thermal oxidizer with a capture and control efficiency greater or equal to 81 percent.

[County Rule 210 §302.1b]

8) The Permittee shall install sufficient instrumentation to automatically shut down the recuperative thermal oxidizer should the rotor concentrator wheel cease to operate.

[County Rule 210 §302.1b]

C. Monitoring and Recordkeeping Requirements

1) The following information shall be documented in a logbook. The logbook shall be stored in an easily accessible location on the premises and produced immediately upon request by the Control Officer.
   (a) A current list for each spray booth (3, 4 and 7) documenting all materials sprayed in each booth. This list shall specify how the spray coatings are transferred to the booth such as a dedicated line from the pump room or the filling of small containers.
   (b) The date, time and description of any change from one operational scenario to another. This shall be documented immediately after the change.
   (c) The ending inventory and usage records of all spray coatings processed during the previous operating scenario for each spray booth that the emission profile changed from a controlled to an uncontrolled scenario or the emissions profile changed from an uncontrolled to a controlled scenario. The inventory and usage records of the spray coatings for each affected spray booth shall be documented in the logbook no later than the close of business, the following weekday (excluding all federal holidays) after the change and before operations of the booth(s) commences after the change in operation scenario has occurred.

(d) The Permittee shall monitor the frequency in Hz of VFD 105 daily while the facility is in operation. The Permittee shall document in a logbook the date and time of the reading, the name of the observer, the number of spray booths venting to the ECS, the frequency in Hz of VFD 105 and whether or not the frequency is within the allowable operational requirements of these permit conditions.

[County Rule 210 §302.1c & d]

2) For any instance in which the VFD 105 operates outside the acceptable frequency, the Permittee shall immediately identify, correct or repair any malfunction and record in a log book the cause of the problem and the corrective action initiated to remedy operation outside the acceptable range.

[County Rule 210 §302.1c & d]

3) For any instance in which the thermal oxidizer operates outside the acceptable range for the combustion chamber or the desorption loop, the Permittee shall immediately identify, correct or repair any malfunction and record in a log book the cause of the problem and the corrective action initiated to remedy operation outside the acceptable range.

[County Rule 210 §302.1c & d]

4) For any instance in which the differential pressure at the inlet plenum primary filter or the inlet plenum secondary filter operates at a differential pressure greater than the allowable differential pressure, the Permittee shall immediately identify, correct or repair any malfunction and record in a log book the cause of the problem and the corrective action initiated to remedy operation outside the acceptable range.

[County Rule 210 §302.1c & d]

D. Reporting Requirements

The Permittee shall include the following information in the semiannual compliance report:

1) A summary of the changes of operational scenarios. This summary shall include the following items;
   (a) The date and time of each change.
   (b) A description of each operating scenario.

[County Rule 210 §302.1e]

2) A summary for every instance in which the ECS operated outside an acceptable range either by Permit Condition or the parameters of the Operation and Maintenance Plan, the summary shall include the date and time the problem was identified, a description of the corrective action taken, the time, date the corrective action was taken and the date and time the problem was completely corrected.

[County Rule 210 §302.1e]

3) A summary of the controlled emissions for each spray booth. The summary shall include all dates that each booth's emissions changed capture and control scenarios, the results of inventory assessment and usage records during each period of continuously controlled emissions.

[County Rule 210 §302.1e]

4) A summary for every instance in which the VFD 105 operated outside an acceptable frequency either by Permit Condition or the parameters of the Operation and Maintenance Plan, The summary shall include the date and time the problem was identified, a description of the corrective action taken, the time, date the corrective action was taken and the date and time the problem was completely corrected.

[County Rule 210 §302.1e]

5) The Permittee shall use an assumed 81% capture and control efficiency until source specific emission factors have been approved by the Department.

[County Rule 210 §302.1e]

6) The Permittee shall submit for approval the most conservative result of the performance test as the capture and control efficiency for the ECS. The efficiency shall be used to calculate controlled emissions for the purpose of the semiannual compliance report and the annual emission inventory required by this Department.

[County Rule 210 §302.1e]

7) Following approval of the performance test results, the Permittee may recalculate its VOC emissions using the demonstrated and approved source specific capture and control efficiencies from the date on which the ECS commenced operation. However this Permit Condition does not exempt the Permittee from enforcement action by this agency for violations of the Permitted monthly or annual VOC limits using the 81% assumed efficiency.

[County Rule 210 §302.1e]

SPECIFIC CONDITIONS FOR POTENTIAL SUPPORT ACTIVITIES

25. ABRASIVE BLASTING

A. OPERATIONAL LIMITATIONS

1) Confined Blasting [County Rule 312 §§301 & 303] [locally enforceable only]

All abrasive blasting operations shall be performed in a confined enclosure consisting of 3 or 4 sides and a roof or cover, unless one of the following conditions are met, in which case unconfined blasting may be performed if it is conducted in accordance with the unconfined blasting section of these Permit Conditions..

a) The item to be blasted exceeds 8 ft. in any one dimension, or
b) The surface being blasted is fixed in a permanent location, cannot easily be moved into a confined enclosure, and the surface is not normally dismantled or moved prior to abrasive blasting.

The Permittee shall not use forced air exhaust an abrasive blasting enclosure unless a certified blasting media is used.

2) Unconfined Blasting [County Rule 312 §301] [SIP Rule 312 §302.4]

If the Permittee performs unconfined blasting, then at least one of the following control measures shall be used:

a) Wet abrasive blasting,
b) Vacuum blasting, or
c) Dry abrasive blasting, provided that all of the following conditions are met:
   (1) Perform only on a metal substrate.
   (2) Use only certified abrasive for dry unconfined blasting.
   (3) Blast only paint that is lead free (i.e. the lead content is less than 0.1percent).
   (4) Perform the abrasive blasting operation directed away from unpaved surfaces.
   (5) Use the certified abrasive not more than once unless contaminants are separated from the abrasive through filtration and the abrasive conforms to its original size.

3) Controls Required [SIP Rule 312 §302]

Any abrasive blasting operation shall use at least one of the following controls:

a) Confined blasting
b) Wet abrasive blasting
c) Hydroblasting

d) A control measure that is determined by the Control Officer to be equally effective to control particulate emissions.

4) Opacity Limitation
The Permittee shall not discharge into the atmosphere from any abrasive blasting operation any air contaminant for an observation period or periods aggregating more than three minutes in any sixty minute period an opacity equal to or greater than 20 percent.
[County Rule 312 §305] [SIP Rule 312 §301]

An indicated excess will be considered to have occurred if any cumulative period of 15-second increments totaling more than three minutes within any sixty minute period was in excess of the opacity standard.
[County Rule 312 §305] [locally enforceable only]

5) Wind Event [County Rule 312 §306] [SIP Rule 312 §302.4]
The Permittee shall not conduct unconfined abrasive blasting when the 60-minute average wind speed is greater than 25 miles per hour.

6) Traffic Makers [County Rule 312 §307] [SIP Rule 312 302.4]
Surface preparation for raised traffic delineating markers and pavement marking removal using abrasive blasting operations shall be performed by wet blasting, hydroblasting or vacuum blasting. Dry blasting may be performed using only certified abrasives when:
a) Removing pavement markings of less than 1,000 square feet
b) Performing surface preparation for raised traffic delineating markers of less than 1,000 square feet.

7) Work Practices
a) Unconfined Blasting: The owner or operator shall clean up spent abrasive material with a potential to be transported during a wind event and, until removal occurs, shall, at a minimum, meet the provisions of Rule 310 of these rules regarding work practices.
[County Rule 312 §308] [SIP Rule 312 §302.4]

b) Confined Blasting: At the end of the work shift the owner or operator shall clean up spillage, carry-out, and/or trackout of any spent abrasive material with a potential to be transported during a wind event.
[County Rule 312 §308] [locally enforceable only]

B. MONITORING/RECORDKEEPING [County Rule 312 §501] [County Rule 210 §302.1c]
At a minimum, the Permittee shall keep the following records onsite, that are applicable to all abrasive blasting operations.
1) The date the blasting occurs,
2) The blasting equipment that is operating,
3) A description of the type of blasting.
4) The type and amount of solid abrasive material consumed on a monthly basis. Include name of certified abrasive used, as applicable.
5) Material Safety Data Sheets (MSDS) or results of any lead testing that was performed on paint that is to be removed via unconfined blasting, as applicable.

C. REPORTING [County Rule 210 § 302.1.e.(1)]
The Permittee shall include the following information in the semiannual compliance report:
1) Whether abrasive blasting occurred during the reporting period,

2) Whether the blasting was confined or unconfined, and
3) If the blasting was unconfined, the control measure used to meet the requirements of these permit conditions.

26. ARCHITECTURAL COATING

A. OPERATIONAL LIMITATIONS AND STANDARDS

The Permittee shall limit the volatile organic compound (VOC) content of architectural coatings as follows:

1) Pavement Sealer: [County Rule 335 §301][SIP Rule 335 §301]

The Permittee shall not apply any architectural coating manufactured after July 13, 1988, which is recommended for use as a bituminous pavement sealer unless it is an emulsion type coating.

2) Non-Flat Architectural Coating: [County Rule 335 §303][SIP Rule 335 §303]

The Permittee shall not apply any non-flat architectural coating manufactured after July 13, 1990, which contains more than 2.1 lbs (250 g/l) of volatile organic compounds per gallon of coating, excluding water and any colorant added to tint bases. These limits do not apply to specialty coatings listed below.

3) Flat Architectural Coating: [County Rule 335 §304][SIP Rule 335 §304]

The Permittee shall not apply any flat architectural coating manufactured after July 13, 1989, which contains more than 2.1 lbs (250 g/l) of volatile organic compounds per gallon of coating, excluding water and any colorant added to tint bases. These limits do not apply to specialty coatings listed below.

4) Specialty Coatings: [County Rule 335 §305][SIP Rule 335 §305]

The Permittee shall not apply any architectural coating manufactured after July 13, 1991 that exceeds the following limits. The limits are expressed in pounds of VOC per gallon of coating as applied, excluding water and any colorant added to tint bases.

COATING	(lb./gal)
Concrete Curing Compounds	2.9
Dry Fog Coating	
Flat	3.5
Non-flat	3.3
Enamel Undercoaters	2.9
General Primers, Sealers and Undercoaters	2.9
Industrial Maintenance Primers and Topcoats	
Alkyds	3.5
Catalyzed Epoxy	3.5
Bituminous Coating Materials	3.5
Inorganic Polymers	3.5
Vinyl Chloride Polymers	3.5
Chlorinated Rubbers	3.5
Acrylic Polymers	3.5

Urethane Polymers	3.5
Silicones	3.5
Unique Vehicles	3.5
Lacquers	5.7
Opaque Stains	2.9
Wood Preservatives	2.9
Quick Dry Enamels	3.3
Roof Coatings	2.5
Semi-transparent Stains	2.9
Semi-transparent and Clear Wood Preservatives	2.9
Opaque Wood Preservatives	2.9
Specialty Flat Products	3.3
Specialty Primers, Sealers & Undercoaters	2.9
Traffic Coatings	
Applied to Public Streets and Highways	2.1
Applied to other Surfaces	2.1
Black Traffic Coatings	2.1
Varnishes	2.9
Waterproof Mastic Coating	2.5

5) Exemptions: [County Rule 335 §§306, 307] [SIP Rule 335 §§306, 307]

The VOC content requirement of this Permit Condition shall not apply to the following:

a) Architectural coatings supplied in containers having capacities of one quart or less.

b) Architectural coatings recommended by the manufacturer for use solely as one or more of the following:

(1) Below ground wood preservative coatings.
(2) Bond breakers.
(3) Fire retardant coatings.
(4) Graphic arts coatings (sign paints)
(5) Mastic texture coatings.
(6) Metallic pigmented coatings.
(7) Multi-colored paints.
(8) Quick-dry primers, sealers and undercoaters.
(9) Shellacs.
(10) Swimming pool paints.
(11) Tile-like glaze coatings.

B. MONITORING AND RECORDKEEPING REQUIREMENTS

[County Rule 210 §302.1c] [County Rule 210 §302.1e]

The Permittee shall keep a material list of all coatings used. The material list shall contain the name of each coating, a short description of the material, the pounds of VOCs per gallon of coating excluding water and colorant added to tint bases, and the amount of each coating used. If the coating is exempt from the volatile organic compounds content requirements, the justification for the determination shall be documented and kept on file.

C. REPORTING REQUIREMENTS [County Rule 210 §302.1e]

The Permittee shall include a statement whether or not architectural coating was performed during the six month reporting period in the semi-annual monitoring report.

27. CUTBACK AND EMULSIFIED ASPHALT:

A. OPERATIONAL LIMITATIONS

1) The VOC content of asphalt materials shall be limited as follows:

a) The Permittee shall not use or apply the following materials for paving, construction, or maintenance of highways, streets, driveways, parking lots, roads, nor shall they be applied onto soil and earthworks:

(1) Rapid cure cutback asphalt.

(2) Any cutback asphalt material, road oils, or tar which contains more than 0.5 percent by volume VOCs which evaporate at 500^0F (260^0C) or less using ASTM Test Method D 402-76.

(3) Any emulsified asphalt or emulsified tar containing more than 3.0 percent by volume VOCs which evaporate at 500^0F (260^0C) or less as determined by ASTM Method D 244-89.

[County Rule 340 §301] [SIP Rule 340 §301]

b) The Permittee shall not store for use any emulsified or cutback asphalt product which contains more than 0.5 percent by volume solvent-VOC unless such material lot includes a designation of solvent-VOC content on data sheet(s) expressed in percent solvent-VOC by volume.

[County Rule 340 §303] [SIP Rule 340 §303]

2) The VOC content limitations of this Permit Condition do not apply to the following:

a) Asphalt that is used solely as a penetrating prime coat and which is not a rapid cure cutback asphalt. Penetrating prime coats do not include dust palliatives or tack coats.

[County 340 §302.1] [SIP Rule 340 §302.1]

b) The Permittee may use up to 3.0 percent solvent-VOC by volume for batches of asphalt rubber which cannot meet paving specifications by adding heat alone only if request is made to the Control Officer, who shall evaluate such requests on a case-by-case basis. The Permittee shall keep complete records and full information is supplied including savings realized by using discarded tires. The Permittee shall not exceed 1100 lbs (500 kg) usage of solvent-VOC in asphalt rubber in a calendar year unless the Permittee can demonstrate that in the previous 12 months no solvent-VOC has been added to at least 95 percent by weight of all the asphalt rubber binder made by the Permittee or caused to be made for the Permittee. This Permit Condition does not apply to batches which yield 0.5 percent or less solvent-VOC evaporated using the test in County Rule 340 § 502.1.

[County 340 §302.3] [SIP Rule 340 §302.3]

B. MONITORING/RECORDKEEPING

[County 340 §501] [SIP Rule 340 §501] [County Rule 210 §302.1.c.(2)]

The Permittee shall keep daily records of the amount and type of asphaltic/bituminous material containing more than 0.5 percent by volume solvent-VOCs which is used at the facility. Records must show the solvent-VOC content of this material.

Material Safety Data Sheets (MSDS) or technical data sheets shall be kept available for any asphalt materials used at the facility. Records must be maintained in a readily accessible location and must be made available to the Control Officer upon request.

C. REPORTING: [County Rule 210 §302.1.e.(1)]

The Permittee shall include the following information in the semiannual compliance report required by these Permit Conditions:

1) A statement on whether asphalt paving was conducted at the facility during the reporting period. If asphalt paving was conducted, then the following information shall also be included:
   a) A statement as to whether the recordkeeping requirements of these Permit Conditions relating to asphalt usage were met.
   b) A listing of any asphalt used that exceeded the VOC content limitations of these Permit Conditions and whether the exceedance was covered by an exemption covered by these Permit Conditions or whether it was a deviation from the requirements of this Permit Condition.

28. DUST GENERATING ACTIVITIES

A. DUST CONTROL PLAN REQUIRED

1) The Permittee shall submit a Dust Control Plan and obtain the Control Officer's approval of the Dust Control Plan, before commencing any routine dust generating operation. The Dust Control Plan shall describe all control measures to be implemented before, after and while conducting any dust generating operation, including during weekends, after work hours, and on holidays. The Plan shall include at least all the information contained in County Rule 310 §304. At least one primary control measure and one contingency control measure must be identified from Table 1 of County Rule 310.

[County Rule 310 §§303, 303.2, 303.3(b) and 303.4(a)]
[SIP Rule 310 §§303, 303.2, 303.3(b) and 303.4(a)]

2) Failure to comply with the provisions of an approved Dust Control Plan is deemed to be a violation of this Permit. Regardless of whether an approved Dust Control Plan is in place or not, the Permittee is still subject to all requirements of these permit conditions at all times. In addition, the Permittee with an approved Dust Control Plan is still subject to all of the requirements of County Rule 310, even if the Permittee is complying with the approved Dust Control Plan.

[County Rule 310 §§303.1 and 306] [SIP Rule 310 §§303.1and 306]

3) If the Control Officer determines that an approved Dust Control Plan has been followed, yet fugitive dust emissions from any given fugitive dust source still exceed limits from this permit condition, then the Permittee shall make written revisions to the Dust Control Plan and shall submit such revised Dust Control Plan to the Control Officer within three working days of receipt of the Control Officer's written notice, unless such time period is extended by the Control Officer, upon request, for good cause. During the time that the Permittee is preparing revisions to the approved Dust Control Plan, the Permittee must still comply with all requirements of these permit conditions.

[County Rule 310 §305] [SIP Rule 310 §305]

4) If any changes to a Dust Control Plan, associated with a Title V Permit, are necessary as a result of the most recent revisions of County Rule 310, then the Permittee shall submit a revised Dust Control Plan to the Control Officer, according to the minor permit revision procedures describe in County Rule 210, no later than 6 months after the effective date of the most recent revisions to County Rule 310.

[County Rule 310 §402.2] [SIP Rule 310 §402.2]

B. ALLOWABLE EMISSIONS

The Permittee shall not allow visible fugitive dust emissions to exceed twenty percent (20%) opacity. Exceedances of the opacity limit that occur due to a wind event shall constitute a

violation of the opacity limit. However, it shall be an affirmative defense in an enforcement action if the Permittee demonstrates all of the following conditions:

1) All control measures required were followed and one or more of the control measures listed below were applied and maintained;
   a) Cease dust generating operations for the duration of the condition/situation/event when the 60-minute average wind speed is greater than 25 miles per hour. If dust generating operations are ceased for the remainder of the work day, stabilization measures must be implemented; or
   b) Apply water or other suitable dust suppressant twice per hour; or
   c) Apply water as necessary to maintain a soil moisture content at a minimum of twelve percent (12%) as determined by ASTM Method D2216-98 or other equivalent as approved by the Control Officer and the Administer of EPA. For areas which have an optimum moisture content for compaction of less than twelve percent (12%) as determined by ASTM Method D1557-91(1998) or other equivalent as approved by the Control Officer and the Administer of EPA, maintain at least seventy percent (70%) of the optimum soil moisture content.
2) The twenty percent (20%) opacity exceedance could not have been prevented by better application, implementation, operation, or maintenance of control measures;
3) The Permittee compiled and retained records, in accordance with Recordkeeping requirements of this permit; and
4) The occurrence of a wind event on the day(s) in question is documented by records. The occurrence of a wind event must be determined by the nearest Maricopa County Environmental Services Department Air Quality Division monitoring station, from any other certified meteorological station, or by a wind instrument that is calibrated according to manufacturer's standards and that is located at the site being checked.

[County Rule 310 §301 and Table 2][SIP Rule 310 §301 and Table 2]

C. OPERATIONAL LIMITATIONS AND STANDARDS

1) Unpaved Parking Lot

   The Permittee shall not allow visible dust emissions from any unpaved parking lot to exceed twenty percent (20%)opacity, and either:
   a) Shall not allow silt loading equal to or greater than 0.33 oz ft^2; or
   b) Shall not allow the silt content to exceed eight percent (8%).

[County Rule 310 §302.1][SIP Rule 310 §302.1]

2) Control Measures:
   a) The Permittee shall implement control measures before, after, and while conducting any dust generating operation, including during weekends, after work hours, and on holidays. See subsection 304.3, Table 1 and Table 2 of County Rule 310. For the purpose of these Permit Conditions, any control measure that is implemented must meet the applicable standard(s) described in County Rule310 §§301 and 302, as determined by the corresponding test method(s), as applicable, and must meet other applicable standard(s) set forth in County Rule 310. Failure to comply with the provisions County Rule 308 (Work Practices), as applicable, and/or of an approved Dust Control Plan, is deemed a violation of this Permit.

[County Rule 310 §306][County SIP Rule 310 §306]

   b) Should any primary control measures(s) in an approved Dust Control Plan prove ineffective, the Permittee shall immediately implement the contingency control measure, which may obviate the requirement of submitting a revised Dust Control Plan. Any control measure that is implemented must meet the applicable standards

described in these permit conditions, as determined by the corresponding test method(s), as applicable, and must meet other applicable standards set forth in County Rule 310.

[County Rule 310 §§303, 303.2, 303.3(b) and 303.4(a)]
[SIP Rule 310 §§303, 303.2, 303.3(b) and 303.4(a)]

3) Work Practices:
Bulk Material Hauling Off-Site Onto Paved Public Roadways
When engaged in bulk material hauling off-site onto paved public roadways, the Permittee shall comply with the following work practices. Such work practices shall be implemented to meet the standards described in County Rule 310 §§ 301 and 302..
a) Load all haul trucks such that the freeboard is not less than three inches; and
b) Prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and / or tailgate(s); and
c) Cover all haul trucks with a tarp or other suitable closure; and
d) Before the empty haul truck leaves the site, clean the interior of the cargo compartment or cover the cargo compartment.

[County Rule 310 §308.1][SIP Rule310 §308.1]
[SIP Rule 316(a) and(b)]

D. MONITORING AND RECORDKEEPING REQUIREMENTS
The Permittee shall keep a daily written log recording the actual application or implementation of the control measures delineated in the approved Dust Control Plan. The log or the records and supporting documentation shall be made available to the Control Officer within 48 hours, excluding weekends, from written or verbal request. If the Control Officer is at the site where requested records are kept, records shall be provided without delay.

[County Rule 310 §502] [SIP Rule 310 §502]

Copies of approved Dust Control Plans, control measures implementation records, and all supporting documentation shall be retained at least five years from the date such records are established.

[County Rule 310 §503] [SIP Rule 310 §503]

29. SOLVENT CLEANING

A. OPERATIONAL LIMITATIONS/STANDARDS:
1) EQUIPMENT RESTRICTIONS [County Rule 210 §302.1]
All cleaning machines shall be one of the following types:
a) Batch loaded cold cleaners with remote reservoir;
b) Batch loaded cold cleaners without a remote reservoir (such as solvent dip tank);
c) Shall use only low VOC cleaner (A low VOC cleaner is any solution or homogeneous suspension that, as used, contains less than 50 grams of VOC per liter of material (0.42 lb VOC/gal) or is at least 95% water by weight or volume); OR
d) A sealed system. A sealed system is one that meets all of the following requirements:
(1) Is an airtight or airless cleaning system which is operated according to the manufacturer's specifications and, unless otherwise indicated by the manufacturer, meets all of the following requirements:
(2) Has a door or other pressure-sealing apparatus that is shut during each cleaning and drying cycle.
(3) Has a differential pressure gauge that always indicates the pressure in the sealed chamber when occupied or in active use.

(4) Any associated pressure relief device(s) shall be so designed and operated as to prevent liquid cleaning-solvents from draining out.

2) SOLVENT HANDLING REQUIREMENTS

[County Rule 331 §301] [SIP Rule 331 §301]

The Permittee shall comply with all of the following requirements:

a) All cleaning-solvent, including solvent soaked materials, shall be kept in closed leakfree containers that are opened only when adding or removing material.
   (1) Rags used for wipe cleaning shall be stored in closed containers when not in use.
   (2) Each container shall be clearly labeled with its contents.

b) If an cleaning-solvent escapes from a container:
   (1) Wipe up or otherwise remove immediately if in accessible areas.
   (2) For areas where access in not feasible during normal production, remove as soon as reasonably possible.

c) Unless records show that VOC-containing cleaning material was sent offsite for legal disposal, it will be assumed that it evaporated on site.

3) EQUIPMENT REQUIREMENTS FOR ALL CLEANING MACHINES:

[County Rule 331 §302] [SIP Rule 331 §302]

a) The Permittee shall provide a leakfree container (degreaser) for the solvents and the articles being cleaned.
   (1) The VOC-containment portion shall be impervious to VOC-containing liquid and vapors.
   (2) No surface of any freeboard required by this rule shall have an opening or duct through which VOC can escape to the atmosphere except as required by OSHA.

b) The Permittee shall maintain and operate all cleaning machine equipment required by this Permit and any of its emission controls required by this Permit.

4) SPECIFIC OPERATING & SIGNAGE REQUIREMENTS FOR CLEANING MACHINES

[County Rule 331 §303] [SIP Rule 331 §303]

a) The Permittee shall conform to the following operating requirements when cleaning with cleaning-solvents other than Low-VOC Cleaners:
   (1) Comfort fans shall not be used near cleaning machines;
   (2) Do not remove any device designed to cover the solvent unless processing work in the cleaning machine or maintaining the machine;
   (3) Drain cleaned parts for at least (15) fifteen seconds after cleaning or until dripping ceases, whichever is later;
   (4) If using a cleaning-solvent spray system:
      (a) Use only a continuous, undivided stream (not a fine, atomized, or shower type spray).
      (b) Pressure at the orifice from which the solvent emerges shall not exceed (10) ten psig and shall not cause liquid solvent to splash outside the solvent container.
      (c) In an in-line cleaning machine, a shower-type spray is allowed, provided that the spraying is conducted in a totally confined space that is separated from the environment.
      (d) Exceptions to the foregoing subsections 1), 2), and 3) are provided for in Special Non-vapor Cleaning Situations in the section titled the same below.

(5) The Permittee shall not cause agitation of a cleaning-solvent in a cleaning machine by sparging with air or other gas. Covers shall be placed over ultrasonic cleaners when the cleaning cycle exceeds (15) fifteen seconds;

(6) The Permittee shall not place porous or absorbent materials in or on a cleaning machine. This includes, but is not limited to, cloth, leather, wood, and rope. No object with a sealed wood handle, including a brush, is allowed;

(7) The ventilation rate at the cleaning machine shall not exceed 65 cfm per square foot of evaporative surface (20 $m^3/min/m^2$), unless that rate must be changed to meet a standard specified and certified by a Certified Safety Professional, a Certified Industrial Hygienist, or a licensed professional engineer experienced in ventilation, to meet health and safety requirements;

(8) Limit the vertical speed of mechanical hoists moving parts in and out of the cleaning machine to a maximum of 2.2 inches per second and (11) eleven ft/min (3.3 m/min);

(9) The Permittee shall prevent cross contamination of solvents regulated by Section 304 of Rule 331 with solvents that are not so regulated. Use signs, separated work-areas, or other effective means for this purpose. This includes those spray gun cleaning solvents that are regulated by another rule.

b) When using cleaning-solvent, other than Low-VOC Cleaner, in any solvent cleaning machine (degreaser) or dip tank, the Permittee shall provide the following signage requirements on the machine, or within 3¼ feet (1 meter) of the machine, a permanent, conspicuous label, or placard which includes, at a minimum, each of the following applicable instructions, or its equivalent:

(1) "Keep cover closed when parts are not being handled." (This is not required for remote reservoir cleaners.)

(2) "Drain parts until they can be removed without dripping."

(3) "Do not blow off parts before they have stopped dripping."

(4) "Wipe up spills and drips as soon as possible; store used spill rags [or 'wiping material'] in covered container."

(5) "Don't leave cloth or any absorbent materials in or on this tank."

(6) For cleaning machines with moving parts such as hoists, pumps, or conveyors, post: "Operating instructions can be obtained from _____" where the Permittee shall list a person or place where the instructions are available.

5) SOLVENT SPECIFICATION [County Rule 331 §304] [SIP Rule 331 §304]

a) All cleaning solvents, except Low-VOC Cleaners, shall be conforming solvents. A conforming solvent is one which has a total VOC vapor pressure at 68ºF (20ºC) not exceeding 1 millimeter of mercury column maximum total VOC vapor pressure.

b) A nonconforming solvent may be used if it is utilized in a sealed system.

6) BATCH CLEANING MACHINES [County Rule 331 §305] [SIP Rule 331 §305]

a) With Remote Reservoir - The Permittee shall equip each batch cleaning machine with remote reservoir, including the cabinet type(s), with the following:

(1) A sink-like work area or basin which is sloped sufficiently towards the drain so as to prevent pooling of cleaning-solvent.

(2) A single, unimpeded drain opening or cluster of openings served by a single drain for the cleaning-solvent to flow from the sink into the enclosed

reservoir. Such opening(s) shall be contained within a contiguous area not larger than 15.5. square inches (100 cm^2).

(3) Provide a means for drainage of cleaned parts such that the drained solvent is returned to the cleaning machine.

b) Without Remote Reservoir - The Permittee shall equip each batch cleaning machine without a remote reservoir with all of the following:

(1) Have and use an internal drainage rack or other assembly that confines within the freeboard all cleaning-solvent dripping from parts and returns it to the hold of the cleaning machine (degreaser).

(2) Have an impervious cover which when closed prevents cleaning-solvent vapors in the cleaning machine from escaping into the air/atmosphere when not processing work in the cleaning machine. The cover shall be fitted so that in its closed position the cover is between the cleaning-solvent and any lip exhaust or other safety vent, except that such position of cover and venting may be altered by an operator for valid concerns of flammability established in writing and certified to by a Certified Safety Professional or a Certified Industrial Hygienist to meet health and safety requirements.

(3) The freeboard height shall be not less than 6 inches (15.2 cm). Freeboard height for batch cleaning machines is the vertical distance from the solvent/air interface to the least elevated point of the top-rim when the cover is open or removed, measured during idling mode.

(4) The freeboard zone shall have a permanent, conspicuous mark that locates the maximum allowable solvent level which conforms to the applicable freeboard requirements.

c) Using Cleaning-Solvent That Is Heated, Agitated, Or Is Non-Conforming - If a cleaning machine uses a cleaning-solvent at a temperature above 120°F (49°C), uses non-conforming solvent, or agitates the solvent, then the Permittee shall comply with one of the following:

(1) Remote Reservoir Cleaning Machines: For a remote reservoir cleaning machine, comply with subsection 305.1 and, in addition, use a stopper in the drain or a cover covering the sink whenever the sink or cabinet is empty of solvent and nothing is being handled in the sink.

(2) Cleaning Machines With Internal Reservoir: A person using a cleaning machine that has an internal reservoir shall comply with subsection 305.2 and either subsections that follow:

(a) A Water Cover: A floating layer of water (insoluble in the solvent) at least 1 inch thick, and a freeboard at least 6 inches above the top of the solvent shall be present; or

(b) Freeboard And Cover:

(i) The basin shall have a freeboard ratio of 0.75 or greater and an impervious cover shall cover the basin whenever work is not being processed; and

(ii) If a non-conforming solvent is used, the cover shall be of a sliding or rolling type which is designed to easily open and close in a horizontal plane without disturbing the vapor zone.

(3) Cabinet Style: Keep a cabinet-style cleaning machine closed at all times that it contains cleaning-solvent, except when introducing or removing work from the machine. If blasting or misting with cleaning-solvent, also conform to the applicable requirements of Section 307.

7) SPECIAL NON-VAPOR CLEANING SITUATIONS:
[County Rule 331 §307] [SIP Rule 331 §307]

a) Blasting/Misting With Conforming Solvent - The Permittee shall operate and equip the devices as follows when blasting or misting with conforming solvents;
(1) The device shall have internal drainage, a reservoir or sump, and a completely enclosed cleaning chamber, designed so as to prevent any perceptible liquid from emerging from the device; and
(2) The device shall be operated such that there is no perceptible leakage from the device except for incidental drops from drained, removed parts.

b) Blasting/Misting With Non-Conforming Solvent - The Permittee shall use a sealed system for all blasting or misting with a non-conforming solvent.

c) High Pressure Flushing - Cleaning systems using cleaning-solvent that emerges from an object undergoing flushing with a visible mist or at a pressure exceeding 10 psig, shall comply as follows;
(1) For conforming solvents, use a containment system that is designed to prevent any perceptible cleaning-solvent liquid from becoming airborne outside the containment system, such as a completely enclosed chamber.
(2) Use a sealed system for non-conforming solvents.

B. MONITORING/RECORDKEEPING: [County Rule 331 §501] [SIP Rule 331 §501]

1) Current List
a) The Permittee shall maintain a current list of cleaning-solvents; state the VOC-content of each in pounds VOC per gallon of material or grams per liter of material.
b) If the Permittee uses any cleaning-solvent that is not a low VOC cleaner, then the Permittee shall have on site the written value of the total VOC vapor-pressure of each such solvent in one of the following forms:
(1) A manufacturer's technical data sheet,
(2) A manufacturer's safety data sheet (MSDS), or
(3) Actual test results.

2) Usage Records
a) Monthly - The Permittee shall record the amount of cleaning-solvent used at the end of each month for the previous month. Show the type and amount of each make-up and all other cleaning-solvent.
b) Annually
(1) Certain Concentrates – The Permittee shall document the use of concentrate that is used only in the formulation of Low VOC Cleaner.
(2) Low VOC Cleaners – The Permittee need not keep a record of a cleaning substance that is made by diluting a concentrate with water or non-precursor compound(s) to a level that qualifies as a Low VOC Cleaner if records of the concentrate usage are kept in accordance with this Permit.
(3) Grouping By VOC Content - For purposes of recording usage, the Permittee may give cleaning-solvents of similar VOC content a single group-name, distinct from any product names in the group. The total usage of all products in that group are then recorded under just one name. (In such case the Permittee shall also keep a separate list that identifies the product names of the particular solvents included under the group name.) To the group name shall be assigned the highest VOC content among the members of that group, rounded to the nearest 10^{th} of a pound of VOC per gallon of material, or to the nearest gram VOC per liter of material.

C. REPORTING: [County Rule 210 302.1.e.(1)]

The Permittee shall include the following information in each semiannual compliance report;

1) certification that the operational requirements, specifically applicable to the Permittee's type of cleaning, continue to be in compliance;
2) a summary of the listed cleaning-solvents currently used at the facility and state the VOC-content of each in VOC per gallon of material or grams per liter of material;
3) certification that monthly and annual recordkeeping was performed as directed in the monitoring/recordkeeping requirements above; and
4) a summary of any testing that may have been performed during the period.

APPENDIX A
EQUIPMENT LIST

Thornwood Furniture Manufacturing Inc.
Permit Number V99-005
Equipment List

Permitted Equipment

QTY	SURFACE COATING Enclosures
3	Bleeker Brothers Water Curtain Spray Booths, 36 HP
2	Bleeker Brothers Water Curtain Spray Booths, 15 HP
4	Bleeker Brothers Water Curtain Spray Booths, 35 HP
4	W/Miller Water Curtain Spray Booths, 15 HP
2	Infrared Curing tunnels for crosslinking, 165 KW
1	Infrared Curing tunnels for crosslinking, 115 KW
2	Infrared Curing tunnels for crosslinking, 66 KW
2	Infrared Curing tunnels for crosslinking, 44 KW

QTY	CONTROL DEVICES
1	Donaldson, HTP192, Baghouse Dust Collector, 170 HP
1	Fisher Klosterman, FKI 312, Baghouse Dust Collector, 250 HP
2	Fisher Klosterman, FKI 312, Baghouse Dust Collector, 300 HP
1	Anguil model 40 Recuperative Thermal Oxidizer with concentrator wheel system

QTY	WOODWORKING EQUIPMENT DESCRIPTION	VENTED TO CONTROL
1	Altendorf, 45, Table Saw, 8 HP	yes
1	Altendorf, TKR45, Table Saw, 8 HP	yes
1	Anderson, Stratos, Router, 25 HP	yes
1	Ayen LBM 32/23 SE, Line Drill 6 HP	yes
4	Ayen, LBM 32/23, Line Drill, 6 HP	yes
1	Ayen, OSB, Dowel Borer, 3 HP	yes
1	B4L converted to Single End Tennoner, 9 HP	yes
1	Baker Resaw Band Saw, 25 HP	yes
12	Blum Mini Drill Press Hinge Machine yes 2 HP	yes
1	BURGMASTER, DRILL TURRIT, Drill 1 HP	no
5	Castle, TSM-20, Mortise Machine, 1 HP	yes
3	Castle, TSM-35, Mortise Machine, 1 HP	yes
1	Celaschi, TSA 240 DS, double edged Tenoner, 90 HP	yes
1	Celaschi, TSA 200N, double edged Tenoner, 30 HP	yes
1	Compustop Cutoff Saw, 5 HP	yes
1	Dayton, bench grinder, 1 HP	no
2	Delta Drill, 11-990, 1 HP	no
2	Dimter, Opticut 304L, cutoff saw, 22 HP	yes
4	Evans Rotork, radial arm saw, 4 HP	yes
1	Grecon, FJL HIZ, Finger Jointer, 50 HP	yes
1	HEIAN, NC442PF, CNC Router, 110 HP	yes
3	Holzher, Kundg, wide belt sander, 27 HP	yes
1	Jet, JDP-14J, Drill, 1 HP	no
1	Jet, JWP-208-3, planer, 3 HP	yes
1	Jet, lathe, 2 HP	no

1	Mereen-Johnson, 312-DC, Gang rip saw, 50 HP	yes
1	MSC band saw, 1 HP	no
3	Olympic, Nova 2, eddgebander, 15 HP	yes
1	Omga radial arm saw, 4 HP	yes
1	Omga, TR2 AN, Mitre saw, 5 HP	yes
1	Omga , RN600, radial arm saw, 4 HP	yes
2	Onsrud Inverted pin router, 1 HP	yes
1	Optimat, Weeke BHC550, Point to point router, 20 HP	yes
1	Optimat, Homag, single sided soft former, 20 HP	yes
1	Optimat, Homag KLO, single sided soft former, 30 HP	yes
4	Optimat, Weeke BP-120 point to point router, 20 HP	yes
2	Optimat, Weeke BP-115 point to point router, 15 HP	yes
4	Pistorius, mitre saws, 6 HP	yes
1	Pistorius, mitre saw, 3 HP	yes
8	Powermatic table saws, 5 HP	yes
1	PR 2000 6 Programmable rip saw, 135 HP	yes
3	Radial arm dados, 4 HP	yes
2	radial arm saws, 4 HP	yes
2	Ritter, R-130, boring machines, 1 HP	no
3	Rockwell drill presses, 1 HP	no
1	Rockwell, Series 22-201 planer, 10 HP	no
1	Rutlend drill press, 2 HP	no
3	Schelling, AW, panel saws, 82 HP	yes
1	Schelling, FLH, panel saw, 40 HP	yes
1	SCMI, B4L edgebander, 5 HP	yes
1	SCMI, Compact 22, Moulder, 15 HP	yes
1	SCMI, Olympic MS176, Edgebander, 35 HP	yes
6	SCMI, Shaper, T-110, 5 HP	yes
2	SCMI, Shaper, T-110, 5 HP	no
1	SCMI, Shaper, T-110 I, 8 HP	yes
1	SCMI, Trim 60, Laminate trimmer, 1 HP	yes
1	Select Machinery, Mill, 1 HP	no
1	Taketawa, RC305 Single line rip saw, 11 HP	yes
1	Timesaver, wide belt sander, 55 HP	yes
3	Tyler, French door dovetail machines, 6 HP	yes
1	Unique, 265, shaper, 3 HP	yes
1	Unique, 310, Cope machine, 10 HP	yes
1	Vitap drinnling machine, 3 HP	yes
1	Voorwood, A111, Shaper/sander, 9 HP	yes
1	Voorwood, A111, Shaper/sander, 9 HP	no
1	Weinig, Hydromat H22 AL , Moulder 65 HP	yes
1	Weinig, Hydromat H23C, Moulder, 103 HP	yes
1	Weinig, Profirmat 23, Moulder , 56 HP	yes
1	Weinig, Profirmat 23E, 59 HP	yes
1	Weinig, Rondamat 934, Profile grinder, 2 HP	no
1	Weinig, Rondamat 960, Profile grinder, 2 HP	no
1	Weinig, Unimat 3000, Moulder, 90 HP	yes
2	Whirlwind 1000R, Chop saws, 5 HP	yes
1	Williams, C17, Hogger, 50 HP	yes
1	Wilton, Belt sander, 1 HP	no
1	Wright Machine, TF 850SP, Blade sharpener, 2 HP	no

QTY PARTS WASHERS (DIP TANKS)
1 Safety Clean, 15 gallon, agitation system, compliant solvent with internal reservoir
1 Safety Clean, 40 gallon, spray system(<10 psig), compliant solvent with internal reservoir

QTY OTHER EQUIPMENT PRESENT BUT NOT REQUIRING PERMITTING
2 Invincible bag dust collectors, 40 HP, vented indoors away from building openings
7 SlaughterBack, PUR 4KG, Glue gun and tank
3 SlaughterBack, KB30, PUR melter
2 Torit, Environmental Dust Booth, 20 HP, vented indoors away from building openings
1 Torit, Environmental Dust Booth, 10 HP, vented indoors away from building openings
1 Cyclone, Bead Blaster, totally enclosed and not vented

APPENDIX B
Table 310-1: Source Type and Control Measures

TABLE 310-1

SOURCE TYPE AND CONTROL MEASURES
Vehicle Use In Open Areas And Vacant Lots: 1A Restrict trespass by installing signs. 2A Install physical barriers such as curbs, fences, gates, posts, signs, shrubs, and/or trees to prevent access to the area.
Unpaved Parking Lots: 1B Pave. 2B Apply and maintain gravel, recycled asphalt, or other suitable material, in compliance with subsection 302.1 of this rule. 3B Apply a suitable dust suppressant, in compliance with subsection 302.1 of this rule.
Unpaved Haul/Access Roads: (The control measures listed below (1C-5C) are required work practices, per subsection 308.4 of this rule.) 1C Limit vehicle speed to 15 miles per hour or less and limit vehicular trips to no more than 20 per day. 2C Apply water, so that the surface is visibly moist and subsection 302.2 of this rule is met. 3C Pave. 4C Apply and maintain gravel, recycled asphalt, or other suitable material, in compliance with subsection 302.2 of this rule. 5C Apply a suitable dust suppressant, in compliance with subsection 302.2 of this rule.
Disturbed Surface Areas: **Pre-Activity:** 1D Pre-water site to the depth of cuts. 2D Phase work to reduce the amount of disturbed surface areas at any one time. **During Dust Generating Operations:** 3D Apply water or other suitable dust suppressant, in compliance with Section 301 of this rule. 4D Apply water as necessary to maintain a soil moisture content at a minimum of 12%, as determined by ASTM Method D2216-98 or other equivalent as approved by the Control Officer and the Administrator of EPA. For areas which have an optimum moisture content for compaction of less than 12%, as determined by ASTM Method D1557-91(1998) or other equivalent approved by the Control Officer and the Administrator of EPA, maintain at least 70% of the optimum soil moisture content. 5D Construct fences or 3 foot - 5 foot high wind barriers with 50% or less porosity adjacent to roadways or urban areas that reduce the amount of wind blown material leaving a site. If constructing fences or wind barriers, must also implement 3D or 4D above. **Temporary Stabilization During Weekends, After Work Hours, And On Holidays:** 6D Apply a suitable dust suppressant, in compliance with subsection 302.3 of this rule. 7D Establish vegetative ground cover in sufficient quantity, in compliance with subsection 302.3 of this rule. 8D Restrict vehicular access to the area, in addition to either of the control measures described in 6D and 7D above. **Permanent Stabilization (Required Within 8 Months Of Ceasing Dust Generating Operations):** 9D Restore area such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby undisturbed native conditions, in compliance with subsection 302.3 of this rule.

10D Pave, apply gravel, or apply a suitable dust suppressant, in compliance with subsection 302.3 of this rule.

11D Establish vegetative ground cover in sufficient quantity, in compliance with subsection 302.3 of this rule.

Open Areas And Vacant Lots:

1E Restore area such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby undisturbed native conditions.

2E Pave, apply gravel, or apply a suitable dust suppressant, in compliance with subsection 302.3 of this rule.

3E Establish vegetative ground cover in sufficient quantity, in compliance with subsection 302.3 of this rule.

Control measures 1F – 1M below are required work practices and/or methods designed to meet the work practices, per Section 308 (Work Practices) of this rule.

Bulk Material Handling Operations And Open Storage Piles:
During Stacking, Loading, And Unloading Operations:

1F Apply water as necessary, to maintain compliance with Section 301 of this rule; and

When Not Conducting Stacking, Loading, And Unloading Operations:

2F Cover open storage piles with tarps, plastic, or other material to prevent wind from removing the coverings; or

3F Apply water to maintain a soil moisture content at a minimum of 12%, as determined by ASTM Method D2216-98, or other equivalent as approved by the Control Officer and the Administrator of EPA. For areas which have an optimum moisture content for compaction of less than 12%, as determined by ASTM Method D1557-91(1998) or other equivalent approved by the Control Officer and the Administrator of EPA, maintain at least 70% of the optimum soil moisture content; or

4F Meet the stabilization requirements described in subsection 302.3 of this rule; or

5F Construct and maintain wind barriers, storage silos, or a three-sided enclosure with walls, whose length is no less than equal to the length of the pile, whose distance from the pile is no more than twice the height of the pile, whose height is equal to the pile height, and whose porosity is no more than 50%. If implementing 5F, must also implement 3F or 4F above.

Bulk Material Hauling/Transporting:
When On-Site Hauling/Transporting Within The Boundaries Of The Work Site When Crossing A Public Roadway Upon Which The Public Is Allowed To Travel While Construction Is Underway:

1G Load all haul trucks such that the freeboard is not less than 3 inches when crossing a public roadway upon which the public is allowed to travel while construction is underway; and

2G Prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate(s); and

3G Install a suitable trackout control device that controls and prevents trackout and/or removes particulate matter from tires and the exterior surfaces of haul trucks and/or motor vehicles that traverse such work site. Examples of trackout control devices are described in Table 1 (Trackout 1J, 2J, 3J) of this rule; and

When On-Site Hauling/Transporting Within The Boundaries Of The Work Site But Not Crossing A Public Roadway Upon Which The Public Is Allowed To Travel While Construction Is Underway:

4G Limit vehicular speeds to 15 miles per hour or less while traveling on the work site; or

5G Apply water to the top of the load such that the 20% opacity standard, as described in Section 301 of this rule, is not exceeded, or cover haul trucks with a tarp or other suitable closure.

Off-Site Hauling/Transporting Onto Paved Public Roadways:

6G Cover haul trucks with a tarp or other suitable closure; and

7G Load all haul trucks such that the freeboard is not less than 3 inches; and

8G Prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate(s); and

9G Before the empty haul truck leaves the site, clean the interior of the cargo compartment or cover the cargo compartment.

Cleanup Of Spillage, Carry Out, Erosion, And/Or Trackout:

1H Operate a street sweeper or wet broom with sufficient water, if applicable, at the speed recommended by the manufacturer and at the frequency(ies) described in subsection 308.3 of this rule; or

2H Manually sweep-up deposits.

Trackout:

1J Install a grizzly or wheel wash system at all access points.

2J At all access points, install a gravel pad at least 30 feet wide, 50 feet long, and 6 inches deep.

3J Pave starting from the point of intersection with a paved public roadway and extending for a centerline distance of at least 100 feet and a width of at least 20 feet.

Weed Abatement By Discing Or Blading:

1K Pre-water site and implement 3K or 4K below.

2K Apply water while weed abatement by discing or blading is occurring and implement 3K or 4K below.

3K Pave, apply gravel, apply water, or apply a suitable dust suppressant, in compliance with subsection 302.3 of this rule, after weed abatement by discing or blading occurs; or

4K Establish vegetative ground cover in sufficient quantity, in compliance with subsection 302.3 of this rule, after weed abatement by discing or blading occurs.

Easements, Rights-Of-Way, And Access Roads For Utilities (Electricity, Natural Gas, Oil, Water, And Gas Transmission) Associated With Sources That Have A Non-Title V Permit, A Title V Permit, And/Or A General Permit Under These Rules:

1L Inside the PM_{10} nonattainment area, restrict vehicular speeds to 15 miles per hour and vehicular trips to no more than 20 per day; or

2L Outside the PM_{10} nonattainment area, restrict vehicular trips to no more than 20 per day; or

3L Implement control measures, as described in Table 1 (Unpaved Haul/Access Roads-1C through 5C) of this rule.

Earthmoving Operations On Disturbed Surface Areas 1 Acre Or Larger:

1M If water is the chosen control measure, operate water application system (e.g., water truck), while conducting earthmoving operations on disturbed surface areas 1 acre or larger.

[County Rule 310 Table 1]

TECHNICAL SUPPORT DOCUMENT
Thornwood Furniture Manufacturing, Inc.
5125 E Madison
Permit Number V99-005
August 31, 2005

Facility Name:	Thornwood Furniture Manufacturing Inc.
Address:	5125 E Madison St.
City, State, Zip:	Phoenix, AZ 85034
Date Application Received:	February 2, 1999

1. INTRODUCTION:

This is a support document intended to provide additional information associated with the issuance of the Title V air quality permit to Thornwood Furniture. However, this Technical Support Document (TSD) is not part of the Permit and is not a legally enforceable document.

Thornwood began operating at its 5125 E Madison St. location in 1992 under installation permit 9201401. Thornwood is currently authorized to operate under permit number 970235. The Thornwood facility is located in an area within Maricopa County that is designated as serious non-attainment for ozone, carbon monoxide and PM_{10} as of April 2004. Pursuant to Maricopa County Air Pollution Control Regulations, Thornwood became classified as a major source of volatile organic compounds (VOCs) when the status of the ozone nonattainment area was downgraded to serious. Prior to that Thornwood operated as a synthetic minor source with a permit limit of 99.9 tons per year of VOCs.

2. SOURCE DESCRIPTION:

The Thornwood Furniture Manufacturing Inc. facility is a manufacturing plant (SIC Code 2511) for the production of wood furniture. The manufacturing process can be described as an activity including milling, assembly, finishing and warehousing.

Thornwood is classified as a major source of VOCs, (which are precursors to the formation of ozone, which is a criteria pollutant). The primary source of the VOCs is from spraying of finishing coatings on the wood furniture. Particulate matter with an aerodynamic diameter less than 10 microns (PM_{10}) and federally listed hazardous air pollutants (HAPs) will not be emitted from Thornwood's facility in quantities exceeding their respective major source thresholds.

3. DESCRIPTION OF PRODUCTION ACTIVITIES:

3.1 Milling

This activity includes crosscutting, ripping, planing, shaping, routing, profiling, drilling, and sanding. Air emissions from these woodworking activities are PM_{10}. Emissions from all milling activities are controlled using a dust collection system currently using two baghouses venting to the outside air, two cyclones venting to the outside air, and two small fabric filters that vent inside of the buildings. The permit contains a compliance plan to replace the cyclones on the milling operations with baghouses. Upon installation of the baghouses, the transfer cyclone would be installed on the

discharge of the hogger. The hogger is used to chop up waste wood into small pieces for disposal and generates minimal amounts of PM10.

3.2 Gluing

Glue up operations are used to join various wooden parts. The glue is water based polyvinyl acetate with minimal VOC emissions and hot melt adhesives.

3.3 Wood Finishing and Use of Solvents

Finishing materials are applied in a series of spray booths. The spray booths are water curtain type. The furniture is routed through the finishing area by means of a tow conveyer system. The bulk of the finishing materials are contained in 55-gallon drums. Hydraulic and pneumatic pumps assist in transferring the finishing material via steel lines to the spray booth locations. The finishing materials are then manually applied at each spray booth location using HVLP, airless or air assisted airless spray guns. Solvents are used for cleanup and wash off. Touchup material is used to correct minor finishing defects.

3.4 Material Transfer

Woodworking machinery generates wood chips, shavings and dust that are routed into a baghouse or cyclone. Waste consisting of pieces of boards and blocks are conveyed into a wood hogger. Material from the pollution control devices are collected in a 40 cubic yard rolloff bins for disposal offsite.

4. EMISSIONS:

4.1 FACILITY WIDE EMISSION LIMITS

The following table lists the emission limits that are in the permit:

Pollutant	Monthly Limit, Tons	Rolling 12 Month Limit, Tons
Volatile Organic Compounds (VOCs)	20.0	99.0
Particulate Matter 10 Microns and Smaller	2.3	23.0
Any Single Federally Listed Hazardous Air Pollutant (HAP)	1.0	3.5
Total of All Federally Listed Hazardous Air Pollutants (HAPs)	2.0	7.0

The rolling 12 month VOC emission limit was voluntarily accepted to avoid Nonattainment New Source Review and the relatively high monthly limit is given in recognition of the cyclical nature of the business and based on the fact that the higher emission rate occurs during the nonozone season.

Thornwood has requested that the facility wide limit for PM10 be based on 8400 hours of operation (24 hours per day for 50 weeks). This would result in a potential to emit of 19.3 tons per year of PM10. To allow for potential future growth, the permit limit was set at 23 tons per year. It is assumed that all woodworking equipment exhaust that is vented outdoors passes thru a baghouse with a 99.5 % control efficiency for PM10.

The HAPs limits allow Thornwood to avoid the woodworking MACT standard.

4.2 VOC Emissions

VOC emissions at Thornwood are seasonal in nature. Past history shows that production increases in the fall and begins to decline in the spring. Therefore more VOCs are emitted around the winter months. The actual VOC emissions from the year 1997 to 2003 can be seen in Table 1. The data was submitted by Thornwood to the emissions inventory group at MCESD.

TABLE 1

	VOC, tons
1998	80
1999	58
2000	48
2001	41
2002	59
2003	89

VOC emissions are calculated using mass balance. There currently is no VOC control equipment at the facility; therefore the amount of VOC used, less any VOCs shipped off site as waste, is equal to the amount emitted to the atmosphere. VOCs are emitted predominantly by the spray coating operations. Very small amounts of VOCs are also emitted from gluing operations and from degreasers. Records must be kept showing the amount of all material used and the technical data sheets containing the VOC and HAP content of all materials used. Recordkeeping is required in the permit to ensure that the facility VOC limit will not be exceeded.

4.3 PM10 Emissions

PM_{10} emissions from Thornwood are emitted from 3 different sources. They are woodworking activities, the transfer of wood waste, and emissions from spray coating operations.

SPRAY OPERATIONS:

PM_{10} emissions from spray coating are calculated based upon the total solids in the sprayed material. Based on AP-42, a transfer efficiency of 65% is used for the HVLP spray guns. The removal efficiency of the water curtain spray booths is assumed to be 98% based upon manufacturer data. The total solids content of the coatings used during 2003 was 16.5 tons.

2003 emissions = 16.5 tons x (1-0.65) x (1-0.98) = 0.12 tons

WOOD WORKING OPERATIONS:

A draft report entitled "Estimating Emissions from Generation and Combustion of 'Waste' Wood," (North Carolina Report) by the North Carolina Department of Environment and Natural Resources, gives the following estimate of the percentages of woodwaste generated by various processes at a woodworking facility:

Rough Sawing	20%
Fine Sawing	30%
Sanding	20%
Molding (hog)	40% (sic)

That report also estimates the percentages of woodwaste that is generated by a process that is regulated as PM (<100 micrometer aerodynamic diameter) as follows:

Rough Sawing	18%
Fine Sawing	31%
Sanding	76%
Molding	5.2%

The total percentage of woodwaste generated at a woodworking facility that is regulated as PM can be estimated by multiplying the percentage of the woodwaste generated by a process and the percentage of that woodwaste that is regulated as PM. Using the numbers given in the North Carolina Report yields the following percentage:

$$(0.2*0.18)+(0.3*0.31)+(0.2*0.76)+(0.4*0.05)=0.3 \text{ or } 30\%$$

Wood waste emissions from wood working are back calculated from the actual wood waste. Records of the weight of the wood waste are kept. The PM10 is assumed to be 30% of the total weight based upon the results of the North Carolina study. The control efficiencies for the baghouses (99.5%) and quad cyclone (95%) were provided by the manufacturers while the efficiency for the transfer cyclone (80%) is the midpoint efficiency from AP-40. In 2002, the baghouses in the south building collected 759 tons of sawdust. The cyclones in the north building collected 3,757 tons. However, this quantity was handled by both the quad and transfer cyclones and so the emissions from each must be calculated. The emissions calculations from the cyclones are conservative in that they use the capture weight rather than the full weight of the material entering the controls.

2002 woodworking emissions = South baghouses + quad cyclone + transfer cyclone

South baghouses = 759 tons x 0.3 x (1-0.995) = 1.2 tons

Quad cyclone = 3,757 tons x 0.3 x (1-0.95) = 56.4 tons

Transfer cyclone = 3,757 tons x 0.3 x (1-0.8) = 225 tons

Total estimated 2002 woodworking emissions = 283 tons

WOODWASTE LOADING

Emissions from the loading of the wood waste are derived by the emission factor of 0.58 pounds per ton (0.00029 tons/ton) of waste removed. This emission factor is from an old AP-42 factor that is no longer current and has not been updated. This emission factor was accepted because there was not a better substitute found.

2002 emissions = 0.00029 x (759 + 3,757) = 1.3 tons

TOTAL CALCULATED PM10 EMISSIONS

Total = spray coating + woodworking + woodwaste handling

Total = 0.12 + 283 + 1.3 = 284 tons

4.4 Hazardous Air Pollutants (HAPS) Emissions

Thornwood emission limitations for federally listed HAPs were incorporated into the permit from previous permit conditions. The limits are 1.0 tons per month and 3.5 tons per year of any one federally listed HAP and 2.0 tons per month and 7.0 tons per year of all federally listed HAPs.

5 Operational Limitations

Recordkeeping requirements are used to limit the emissions of VOCs and HAPs from the facility. Particulates are based upon the maximum potential to emit from the facility. Additional operational limitations, such as material usage or hours of operation limitations, are not necessary to produce enforceable emission limitations.

6. Applicable Requirements

6.1 County Rule 300 and SIP Rule 30 – Opacity Limits

a. DISCUSSION

County Rule 300 restricts visible emissions from any source to 20% opacity or less, other than emissions of uncombined water. County Rule 300 and the 20% opacity limitation of the permit conditions are locally enforceable only. SIP Rule 30 and the 40% opacity limitation of the permit conditions are federally enforceable.

b. MONITORING

The Permittee is required to perform observations on a daily basis looking for visible emissions other than steam. This requirement monitors for the presence of opacity from sources that vent outdoors.

If visible emissions are observed, the Permittee must begin a monitoring schedule which requires that a certified visible emissions evaluator determine the opacity of the emissions using the techniques specified in EPA Reference Method 9.

The initial Method 9 opacity reading must be taken within twenty four (24) hours of observing visible emissions. If the emitting equipment is not operating on the day that the initial Method 9 opacity reading is required to be taken, then the initial Method 9 opacity reading must be taken the next day that the emitting equipment is in operation. If the problem causing the visible emissions is corrected before the initial Method 9 opacity reading is required and there are no visible emissions while the equipment is in normal operation, the Permittee is not required to conduct the Method 9 opacity reading.

After the initial reading, follow-up Method 9 opacity readings must be performed in accordance with the following schedule:

1) Daily:
   a) A Method 9 opacity reading must be conducted each day that the emitting equipment is operating until a minimum of 14 daily Method 9 readings have occurred. This is to provide a degree of confidence that the readings are consistent and not fluctuating in and out of compliance.
   b) If the Method 9 opacity is less than 20% for 14 consecutive days, the frequency of Method 9 opacity readings may be decreased to weekly.

2) Weekly:
   a) If the Permittee has obtained 14 consecutive daily Method 9 readings which do not exceed 20% opacity, the frequency of Method 9 readings may be decreased to once per week for any week in which the equipment is operated.
   b) If the opacity measured during a weekly Method 9 reading exceeds 20%, the frequency of Method 9 opacity readings shall revert to daily.
   c) If the opacity measured during the weekly Method 9 readings never exceeds 20%, the Permittee must continue to obtain weekly opacity readings until no visible emissions are present.

3) Cease Follow-up Method 9 Opacity Monitoring:
Regardless of the applicable monitoring schedule, follow-up Method 9 opacity readings may cease if the emitting equipment, while in its standard mode of operation, has no visible emissions, other than uncombined water, during every observation taken during a Method 9 procedure.

6.2 County Rule 310 and SIP Rules 310

The facility has an unpaved parking lot that is subject to the requirements of Rule 310. Thornwood has an approved dust control plan to cover this operation. To monitor for compliance, Thornwood is required to keep records of the control measures that it takes to comply with the approved dust control plan.

6.3 County Rule 311 and SIP Rules 311 and 31.B - Particulate Matter For Woodworking Emission Limitations

a. DISCUSSION

The facility is subject to both County Rule 311 and SIP Rules 311 and 31.B, Particulate Matter from Process Industries, which imposes a cap on hourly emissions of particulate matter based on the process weight of material at the facility. The facility does not process more than 60,000 pounds per day of wood, therefore, an applicable requirement is County Rule 311 §301.1, with the following process weight rate equation:

$$E = 3.59P^{0.62}$$

Where:
E = Emissions in pounds per hour, and
P = Process weight rate in tons per hour.

Also applicable are Rule 311 §§305 and 306, which allow Thornwood to comply with the particulate matter standard by operating an approved "emission control system", with an approved O&M plan. Thornwood currently operates a 170 HP baghouse, a 250 HP baghouse, a 305 quad cyclone, and a 40 HP cyclone. Since the 99.5% baghouse efficiency is used to demonstrate compliance with the requirements of Rule 311, it is included as an operating requirement in the permit. The permit requires that the exhaust of all woodworking equipment vented to the outside air pass thru an approved emissions control device without bypass.

b. EMISSIONS CALCULATIONS

The facility processed 12,683 tons of wood during 4,000 hours of operation (during 2002). This equals 6,342 pounds or 3.17 tons per hour.

Allowable emissions E = 3.59P**0.62 = 3.59 (3.17)**0.62 = 7.34 lb/hr

The permit contains a compliance plan to replace the cyclones with new baghouses. Unlike the current cyclones, these baghouses will operate independently i.e. they will not exhaust into one another. When installed they will produce emissions as follows for the operations that are part of the north building:

Theoretical 2002 emissions = 3,757 tons x 0.3 x (1-0.995) = 5.6 tons

Total theoretical emissions after change
= Spray coating + (south baghouses + north baghouses) + woodwaste transfer
= 0.12 + (1.2 + 5.6) + 1.3 = 8.2 tons

Based upon 4,000 hours of operation, this comes out to 4.11 pounds per hour which is less than the 7.34 pounds allowed by Rule 311.

When the installation of the two new baghouses is completed, the permit's compliance schedule removes the quad cyclone from service and the transfer cyclone is restricted to operating on the output of the hogger only. For the purposes of meeting the requirements of Rule 311, the baghouses are approved control devices with approved Operation and Maintenance plans.

c. MONITORING

The permit limit is based upon the maximum potential to emit and the facility will be in compliance with the requirements of Rule 311 with properly functioning baghouses. Therefore, monitoring for proper baghouse operation is adequate to assure compliance with the particulate emission requirements of the permit.

To monitor for proper baghouse operation, pressure drop readings across each operating baghouse must be taken and recorded for each day of operation. To verify that the original allowable pressure drop range in the permit is representative of normal operation, Thornwood is required to submit documentation of the actual operating ranges of the baghouses. Ten days of data that was gathered over the last two years must be submitted to document the extreme ranges of the pressure drop that the system operates under.

The daily opacity monitoring serves as a secondary monitoring method.

6.4 County Rule 315 Spray Coating Operations

a. DISCUSSION

Thornwood regularly uses spray-coating equipment to apply coating to wood furniture and fixtures. According to the application, the spray coating activity at Thornwood is conducted entirely inside spray booths within the buildings. All spray booths have forced air exhaust and are currently of the waterwash variety. Since dry filter booths are so dominant in the industry, the permit also makes conditions for them even though none are currently installed.

b. MONITORING
For the waterwash booths, a daily visual inspection of the waterfall pattern is used as a screening tool to monitor for possible problems with the spray system in the booth. For dry filters, a daily visual inspection for gaps and holes is required. Since there are no provisions to do surface coating outside of the buildings, no monitoring is necessary for spray coating outside of enclosures outside of buildings.

6.5 County Rule 320 - Odors and Gaseous Air

a. DISCUSSION:
County Rule 320 §§300, 302 and 303, entitled "Standards", "Material Containment Required" and "Reasonable Stack Height Required", respectively, apply to this facility and have been incorporated into the permit conditions. Permit conditions based on County Rule 320 §300 are locally enforceable only.

b. MONITORING
The Department's complaint line is used to monitor for compliance with these requirements. In addition, the facility is required to keep a log of offsite odor complaints that must be reported to the Department in the semiannual monitoring report.

6.6 County Rule 331 and SIP Rule 331

The permit requires degreasers to be cold cleaners, use low VOC solvents or be sealed systems. The facility has two cold cleaners with internal reservoirs and compliant solvents

The permit contains Sections 301 thru 305 and Section 307 of the rule. Since there are no inline cleaners or emission control systems, these are not addressed. Section 501 of the Rule is included to cover the monitoring.

6.7 County Rule 342 and SIP Rule 342 – Coating of Wood Furniture and Fixtures

a. DISCUSSION
The Permittee chose to show compliance with this Rule by the use of compliant coatings and the use of compliant coatings is the only operating scenario in the permit. All the requirements of the Rule are included in the permit with the exception of those that deal with alternative operating scenarios, emission control devices and small sources since they are not applicable requirements.

b. MONITORING
Rule 342 is a recent rule and its incorporation into the permit provides adequate monitoring and recordkeeping to demonstrate compliance with its applicable requirements. However, because the allowable emission level of the permit approaches the applicable requirement, the recordkeeping becomes more stringent than that required by Rule 342 as the 11 month rolling total of VOC emissions approached the limit. At 79 tons, the recordkeeping goes to weekly and at 90 tons the recordkeeping requirement becomes daily.

6.8 Potentially Applicable Requirements

Emission generating activities that are infrequent and not associated with the business conducted at the facility are not required to be covered by the permit. Although not

required to be in the Permit, Thornwood Furniture would still be required to comply with all applicable requirements if the activities were to be conducted. Thornwood Furniture has voluntarily accepted conditions to cover architectural coating, abrasive blasting and asphalt paving so that the applicable requirements for these potential activities are clearly presented in the permit.

7. NONAPPLICABLE REQUIREMENTS

7.1 County Rule 240 §307

The proposed permit does not contain any changes that would result in a change in actual emissions for VOCs. The five year aggregating provisions therefore do not apply.

7.2 County Rule 330

The only two VOC emitting processes at the facility, coating of wood furniture and degreasing activities, are both covered by specific rules and these rules include provisions for material containment. Therefore, Rule 330 does not apply.

7.3 County Rule 370 and 40 CFR Part 63 – Woodworking MACT standard

The facility has never been subject to the MACT standard. Thornwood has taken limits of 3.5 tons for any single federally listed HAP and 7.0 tons for all federally listed HAPs over a 12 rolling month period to avoid MACT applicability in the future. Compliance with the permit limits is determined using mass balance. Since the voluntarily accepted limits are so far from any applicable requirement, monthly recordkeeping was determined to be adequate.

7.4 Nonattainment New Source Review

a. VOCs

The facility operates in an area that was classified as moderate nonattainment for ozone when the facility was initially constructed in 1992. The major source threshold for VOCs was therefore 100 tons per year until the designation was downgraded to serious on Feb. 13, 1998. The facility was originally permitted as a minor source with a limit of 50 TPY of VOCs. The limit was raised to 99 TPY by permit 93-0054 with conditions dated 5-9-94. In permit number 97-0235 the limit was 99.9 TPY of VOCs.

In the proposed permit, the limit is brought down to 99.0 tons to allow it to meet the requirement of being an enforceable emission limitation. To make this slightly lower limit enforceable, graduated recordkeeping requirements have been put into the permit. Monthly usage records for VOC containing material is required if the 12 month rolling average is below 80 tons. Once the 80 tons is exceeded, the recordkeeping frequency increases to weekly. When the 90 ton limit is reached, the material usage recordkeeping requirement becomes daily with a maximum of two business days allowed for the calculations.

b. PM10

The facility has always had an allowable emission limit for PM10 of either 14.9 or 15 tons per year, well below the serious PM10 nonattainment area threshold of 70 tons. The current permit limit of 23 tons, based upon the potential to emit of the facility with the existing and proposed baghouses installed, is still substantially below the major source threshold level.

7.5 Compliance Assurance Monitoring (CAM) (40 CFR 64)

Thornwood is not major after controls therefore an analysis of CAM applicability is delayed until the permit is reopened or renewed

8. ALTERNATIVE OPERATING SCENARIOS

There are no alternative operating scenarios included in the permit.

9. STREAMLINING

No streamlining was performed in the permit.

10. TESTING

The permit contains a compliance plan to replace the quad cyclone and the transfer cyclone with new baghouses. Since performance testing has never been conducted, the permit conditions require that Thornwood perform baseline emission tests on both of the current baghouses as well as the two proposed baghouses. Since the quad cyclone is being removed and the transfer cyclone will be restricted to service on the hogger, no emissions testing is required for them.

County Rule 200 Section 309 has granted the Control Officer the authority to require emissions testing if other sources of information are determined to be inadequate and certain other findings are made. The Control Officer has determined that the information available is not adequate. In addition, the Control Officer has determined that:

a. The facility emits PM10. The USEPA has determined that exposure to this pollutant can adversely affect human health.
b. The test method to be used is EPA Test Method 5 or EPA Test Method 201A. These are EPA approved test methods and have been shown to produce scientifically acceptable results.
c. EPA Test Method 5 and EPA Test Method 201A have been shown to be technically feasible.
d. EPA Test Method 5 and EPA Test Method 201A have been shown to be reasonably accurate
e. After examining the estimated cost of the test, the Department believes that the cost of a stack-sampling test of the control device performance is reasonable to determine the effectiveness of the control device, to establish a base line of emissions, to avoid potential fines, to establish parametric monitoring, to demonstrate adequacy of a maintenance program on equipment or controls, to provide emissions rate information for possible future PSD/NSR modeling requirements and to establish emissions rate information for environmental justices purposes.

11. COMPLIANCE PLAN

The Permit contains a compliance plan that requires that two new baghouses be installed to service the woodworking equipment which is exhausted to the outside air. The quad cyclone will then be removed from service entirely. The transfer cyclone may still be used, but only on the exhaust from the hogger which produces minimal PM10 emissions.

12. PERMIT SHIELD

A permit shield was not requested by the Permittee and none is included in the Permit.

13. OTHER CONSIDERATIONS

Cyclone monitoring:
The cyclones currently do not have any parametric monitoring installed. Since the quad cyclone will be removed and the transfer cyclone will be restricted to operating on the exhaust of the hogger which produces minimal PM10 emissions, the addition of parametric monitoring for the cyclones was not required.

Previous Permit Conditions:
The original installation permit for this facility, permit number #9200244, was issued in 1992 and contained 4 significant conditions. Two, the requirement to use HVLP guns and the recordkeeping requirements for VOC containing materials are incorporated into the current permit thru the requirements of Rule 342. The third requirement was to meet the VOC limit of 50 TPY of VOCs. This limit was later raised to 99.9 tons. The current permit has a limit of 99 TPY for total VOC emissions. The fourth requirement was that the facility meet the VOC content limits contained in the application. A copy of this original application is no longer in the Department's files. However, during a subsequent application in 1993 (93-0054) to raise the facility wide VOC limit to 99 TPY, a new BACT analysis was performed. Due to advances in coating technology, the VOC content requirements in the current Rule 342 are more restrictive than the 1993 BACT limitations so they are no longer applicable.

The other previous condition to be carried over into the Title V permit is the requirement to provide initial and annual follow up training to coating equipment operators.

14. DISPERSION MODELING:

Based upon the information in the application, during 2002 the federally listed HAP with the highest emission rate from the facility was xylene. A total of 1,200 pounds of xylene were emitted. Other HAPs emissions from woodworking facilities typically include toluene and methanol as well. Screen3 modeling was conducted for toluene, xylene, and methanol at the maximum allowable emission rate of 3.5 tons per year and 4000 hours of operation as is the facility's current method of operation. Since it is still valid, the calculations used the modeling submitted in 1998 were used for the calculations. The results were compared to the 1999 Arizona Ambient Air Quality Guidelines (AAAQGs).

Input Parameters:

Emission Rate	1 g/sec
Source Type	Point
Stack Height:	13.41 m (height above ground)
Stack Diameter:	1.07 m (inside diameter)
Exit Gas Velocity:	9.9 m/s
Exit Gas Temperature:	293 K
Ambient Temperature	293 K

Simple Terrain with a receptor height of 0 meters
Rural Option

Min. Bldg. Dimension	89 m
Max. Bldg. Dimension	128.6 m

The resulting maximum concentration occurred at 91 m and was 537 micrograms for 1 hour. At 3.5 tons over 4000 hours, the emission rate would be .022 g/sec and the maximum impact would be 0.22 x 537 or 119 micrograms over a 1 hour period.

TABLE 3: SCREEN3 Modeling Results

HAP	Lbs. per year	Emission Rate g/s	SCREEN3 RESULTS (ug)		AAAQG STANDARDS (ug)	
			1-hr	24 hour	(1-hr)	24 hr
Toluene	7000	0.22	119	47	4400	3000
Xylene	7000	0.22	119	47	5400	3500
Methanol	7000	0.22	119	47	2600	2100

[a] 1-Hr to 24-Hr Concentration: Multiply by 0.4

The predicted concentrations are all well below the AAAQGs.

Thornwood Furniture Manufacturing
V97-005
October 6, 2005
SIGNIFICANT MODIFICATION S04-011
October 6, 2005
Public Notice Date: June 15, 2005
EPA 45- Day Review Date: June 15, 2005

Thornwood furniture manufacturing submitted a significant modification application to the Department on December 15, 2004. The application requested a modification to the permit conditions to allow the installation of an Anguil recuperative thermal oxidizer (Model 30) in combination with an Anguil rotor concentrator (Model 300). The purpose of the control was to allow Thornwood to have more operational flexibility concerning the VOC content of the coatings without exceeding their monthly and annual VOC limits. This significant revision allows for only spray booths 3, 4 and 7 to be connected to the emission control system (ECS). The Permittee will have the ability to control or not to control these three spray booths. All coatings that will be used are required to be in compliance with the allowable VOC limits in County Rule 342 and SIP Rule 342. Non-compliant coatings are not permitted to be used at this facility under the current permit conditions.

The original application requested for the ability for non-compliant coatings to be used. After further discussions, Thornwood decided that at this time, non-compliant coatings will not be used. The Permit conditions do not allow for the use of non-compliant coatings.

The equipment to be installed is a recuperative thermal oxidizer rated at 3,750scfm and a rotor concentrator is rated at an inlet flow capacity of 30,000 scfm. The rotor efficiency for capture is rated at 96% and the oxidizer has a rated destruction efficiency of 99%. The capture from the spray booths to the control is currently unknown. Source specific capture and control efficiencies will be developed through a required source test. A test is required for each of the three booths (3, 4 and 7) individually as well as all three in combination. The testing will be required every 30 months from the previous test for the life of the control. This testing will include VOC, NOx and CO emission rates, flow rates from each spray booth (3, 4 and 7), combustion temperature, desorption loop temperature, VOC capture efficiency, and VOC destruction efficiency of the oxidizer. Thornwood must use Method 18 to quantify the amount of exempt (non VOC) compounds such as methane or acetone. The results of Method 18 will allow the subtraction of exempt compounds from total VOC emissions in the capture and control efficiency calculations. The total VOC emissions are determined by Method 25 or 25A. Thornwood will be permitted to deduct the captured and controlled VOCs from their monthly and 12 month rolling total for VOC emissions. An 81% capture and control will be assumed until source specific factors from the test results are approved by the Department. The most conservative result from the required testing shall replace the assumed 81%. Currently the VOC emissions are calculated using a mass balance from the usage records. The mass of VOC is determined using the VOC percent by weight from the technical data sheets or a MSDS, assuming one-hundred percent of VOC is emitted to the atmosphere. As of June 15, 2005, emissions began to be vented to the ECS. These controlled emissions can be deducted from the mass balance to determine actual emission from the facility. Alternative test methods shall not be used unless approved in writing by the Control Officer and the Administrator

Spay booths 3, 4 and 7 can be vented to the ECS. Thornwood is required by permit to document each time any of the three spray booths change from an uncontrolled operating scenario to a controlled and vice versa. Thornwood is required to inventory of all spray coatings for each spray booth upon changing operating scenarios and before resuming operation. The inventory is required to calculate the amount of VOC that was controlled. The inventory records must be kept on site and available for review. A summary of changes and inventory records must be submitted in the semi-annual compliance report.

Parametric monitoring requirements include combustion chamber and desorption loop temperature, Variable frequency drive fans (in Hz) and differential pressures at the inlet plenum primary and secondary filter. Permit conditions require parametric monitoring. Allowable operating ranges are a component of permit conditions. Operation outside the allowable ranges do not necessarily constitute a violation of permit condition but it does require Thornwood to switch the spray booths to the uncontrolled operating scenario until corrective action can be taken to return the ECS to proper operation.

The RACT requirements of County Rule 241 require the oxidizer to be source tested for NOx and CO emissions. Thornwood submitted emission limits. The Department accepted these limits. RACT require the use of natural gas or propane as a fuel supplement.

The control device was installed prior to the approval of this permit revision. A prior interim Division Manager (MCESD) gave Thornwood a verbal approval to begin installation. The Department and Thornwood have entered into an order of abatement by consent that allowed Thornwood to begin operation of the ECS when the permit was placed in public notice.

Thornwood may use emission factors equal or less than the most conservative test result that have been verified by source testing. However it has been made clear to Thornwood that if they use an emission factor from a source test and the following source test shows that the capture or control efficiency has deteriorated, Thornwood may have to verify that the emission limits have not been exceeded during the 30 month testing interval using the new, lower emission factor.